

SEQUENCE LISTING

<110> ITOH, Kyogo

<120> Tumor antigen

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<151> 2001-06-12

<150> JP P2001-250728

<151> 2001-08-21

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T lymphocytes

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Met Val Phe Leu Lys Gly Lys Leu Gly Val

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T lymphocytes

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T lymphocytes

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Gly Leu Phe Arg Met Lys Leu Leu Leu

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<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
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<210> 95

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 95

Phe Val Ala Asp Gly Ile Phe Lys Ala
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<210> 96

<211> 10

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<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 96

Phe Ile Met Glu Ser Gly Ala Lys Gly Cys
1 5 10

<210> 97

<211> 10

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<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 97

Trp Ile Pro Asn Asn Val Lys Thr Ala Val
1 5 10

<210> 98

<211> 9

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<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Arg Ile Met Asn Thr Phe Ser Val Val

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<210> 99

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<210> 100

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T lymphocytes

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<210> 101

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<210> 102

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Gln Leu Val Glu Glu Glu Leu Asp Arg Ala
1 5 10

<210> 103

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5 10

<210> 104

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5

<210> 105

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Glu Leu Val Arg Phe Arg Gln Lys Val
1 5

<210> 106

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5

<210> 107

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Met Val Leu Asp Leu Met Gln Gln Leu
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<210> 108

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Ile Met Gln Asn Leu Leu Ser Lys Asp Val
1 5 10

<210> 109

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Glu Leu Ala Glu Glu Glu Pro His Leu Val
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<210> 110

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<210> 111

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5 10

<210> 113

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Ile Ile Ile Arg Ser His Trp Thr Asp Val

1 5 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<210> 115

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Tyr Val Ala Arg Asn Ala Lys Asp Val

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<210> 118

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Gly Leu Phe Ile Phe Ser Ile Val Phe Leu
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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Trp Leu Leu Leu Pro Leu Leu Gly Ala Val
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<210> 121

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 121

Ile Leu Phe Arg Gly Val Gly Met Val
1 5

<210> 122

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Gly Leu Gln Ala Arg Asn Asn Ala Arg Val
1 5 10

<210> 123

<211> 10

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<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 123

Asp Val Tyr Gly Val Phe Gln Phe Lys Val
1 5 10

<210> 124

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 124

Ser Leu Asn Pro Ile Leu Phe Arg Gly Val
1 5 10

<210> 125

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 125

Thr Leu His Thr Trp Gly Ser Lys Val
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<210> 126

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 126

Cys Leu Pro Ser Gly Phe Pro Gly Leu
1 5

<210> 127

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Phe Leu Leu Leu Leu Phe Glu Thr

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<210> 130

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<210> 131

<211> 9

<212> PRT

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 131

Phe Leu Leu Leu Phe Gly Phe Trp Lys

1

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<210> 132

<211> 9

<212> PRT

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Ser Val His Pro Arg Leu Phe Leu Leu

1

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<210> 133

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 133

Ile Leu Phe Pro Arg Lys Pro Ser Ala

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 137

Lys Ile Thr Leu Pro Val Asp Phe Val
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<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Ser Leu Phe Asp Glu Glu Gly Ala Lys Ile
1 5 10

<210> 139

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Gln Leu Ile Asn Asn Met Leu Asp Lys Val
1 5 10

<210> 140

<211> 10

<212> PRT

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Phe Cys Leu Asp Asn Gly Ala Lys Ser Val
1 5 10

<210> 141

<211> 9

<212> PRT

<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 141

Ile Ile Gly Gly Gly Met Ala Phe Thr
1 5

<210> 142

<211> 10

<212> PRT

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 142

Ala Leu Phe Val Ser Phe Ile Ile Asn Val
1 5 10

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<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5 10

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<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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1 5

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<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 146

Tyr Leu Gly Trp Gln Cys Leu Ile Ala Leu

1 5 10

<210> 147

<211> 10

<212> PRT

<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 147

Lys Leu Leu Trp Ile Leu Leu Leu Ala Thr
1 5 10

<210> 148

<211> 9

<212> PRT

<213> Artificial Sequence

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 148

Met Leu Phe Ile His Ala Glu Val Ile
1 5

<210> 149

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 149

Lys Leu Ile Lys Arg Ser Gly Tyr Ile
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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 153

Phe Leu Asn Gly Tyr Asn Cys Thr Val
1 5

<210> 154

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 154

Ala Met Leu Lys Thr Arg Arg Ser Tyr Leu
1 5 10

<210> 155

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 155

Thr Leu Met Lys Pro Ser Ser Phe Thr Thr
1 5 10

<210> 156

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Leu Leu Val Asn Ser Gly Pro Leu Ala Val
1 5 10

<210> 157

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Met Leu Gly Ser Ala Asp Glu Pro Gly Val
1 5 10

<210> 158

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Lys Gln Asn Asp Leu Pro Gly Ile Ser Val
1 5 10

<210> 159

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 159

Tyr Leu Thr Met Leu His Leu Tyr Lys Cys
1 5 10

<210> 160

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Ile Thr Gly Glu Ala Phe Val Gln Phe Ala
1 5 10

<210> 161

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 161

Val Val Ala Cys Asn Leu Tyr Pro Phe Val
1 5 10

<210> 162

<211> 9

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Met Leu Gly Gly Arg Val Lys Thr Leu

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<210> 163

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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Gln Leu Tyr Thr Leu Gln Pro Lys Leu

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<210> 164

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T lymphocytes

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Gly Leu Val Glu Phe Ala Arg Asn Leu

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<210> 165

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

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T lymphocytes

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Arg Leu Asp Phe Asn Leu Ile Arg Val

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<210> 167

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T lymphocytes

<400> 167

Ile Leu Ala His Thr Asn Leu Arg Leu

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<210> 168

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 168

Cys Met Val Tyr Asp Leu Tyr Lys Thr Leu

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5

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<210> 169

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 169

Trp Gln Leu Val Lys Glu Leu Lys Glu Ala
1 5 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 170

Leu Leu Leu Thr Ala Pro Asn Leu Leu
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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 171

Ala Leu Phe Pro Gly Leu Ala Pro Glu Thr
1 5 10

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T lymphocytes

<400> 172

Trp Leu Leu Gly Gly His Val Glu Leu
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T lymphocytes

<400> 173

Phe Leu His Leu Leu Gln Ala Asp Asn Val
1 5 10

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<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 174

Leu Gln Ser Asp His Phe Leu His Leu Leu
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<210> 175

<211> 10

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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 175

Met Met Met Leu Gln Asn Ile Leu Gln Ile
1 5 10

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T lymphocytes

<400> 176

Gln Leu Val Gly Leu Leu Ser Pro Met Val
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T lymphocytes

<400> 177

Leu Leu Met Ala Glu Ser His Gln Glu Ile
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T lymphocytes

<400> 178

Lys Leu His Gln Ala Ala Cys Leu Ile

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<210> 179

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T lymphocytes

<400> 179

Ile Leu Ser His Cys Cys Val Gly Leu

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<210> 180

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T lymphocytes

<400> 180

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T lymphocytes

<400> 181

Lys Leu Phe Ala Pro Trp Arg Gly Leu

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T lymphocytes

<400> 182

Lys Leu Gly Glu Glu Ser Gly Asp Glu Ile
1 5 10

<210> 183

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T lymphocytes

<400> 183

Tyr Asp Tyr Asp Gly Tyr Arg Leu Arg Val
1 5 10

<210> 184

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<213> Artificial Sequence

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<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 184

Arg Gly Gly Pro Pro Phe Ala Phe Val
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T lymphocytes

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Thr Leu Gly Asp Ala His Ile Tyr Leu
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Tyr Met Ile Ala His Ile Thr Gly Leu
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peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 187

Tyr Leu Asn His Ile Glu Pro Leu Lys Ile
1 5 10

<210> 188

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 188

Leu Met Ala Leu Pro Pro Cys His Ala Leu
1 5 10

<210> 189

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 189

Lys Leu Leu Trp Thr Thr Ser Arg Val
1 5

<210> 190

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 190

Arg Leu Val Gln Asn Cys Leu Trp Thr Leu
1 5 10

<210> 191

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 191

Val Leu Phe Tyr Ala Ile Thr Thr Leu
1 5

<210> 192

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 192

Ile Met Phe Asp Val Thr Ser Arg Val
1 5

<210> 193

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 193

Leu Thr Gly Glu Phe Glu Lys Lys Tyr Val
1 5 10

<210> 194

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 194

Ala Leu Tyr Glu Lys Asp Asn Thr Tyr Leu

1 5 10

<210> 195

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 195

Phe Met Ile Leu Ala Ser Pro Arg Tyr Val
1 5 10

<210> 196

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 196

Lys Leu Thr Ser Leu Gln Leu Gln His Leu
1 5 10

<210> 197

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 197

Ser Leu Gln Leu Gln His Leu Phe Met Ile
1 5 10

<210> 198

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 198

Gln Val Leu Pro Met Leu Arg Phe Val

1

5

<210> 199

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 199

Lys Met Val Thr Met Val Ser Val Leu

1

5

<210> 200

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 200

Ala Leu Phe Lys Cys Tyr Met Phe Leu

1

5

<210> 201

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 201

Phe Leu Ala Leu Pro Leu Glu Asp Val
1 5

<210> 202

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 202

Arg Leu Pro Leu Cys Arg Pro Gln Phe Leu
1 5 10

<210> 203

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 203

Leu Met Pro Glu Arg Arg Pro His Leu
1 5

<210> 204

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 204

Phe Leu Gln Leu Gln Ser Ile Lys Asp Ala
1 5 10

<210> 205

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 205

Lys Ile Leu Phe Lys Thr Trp His Leu
1 5

<210> 206

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 206

Ile Leu Phe Lys Thr Trp His Leu Ile
1 5

<210> 207

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 207

Phe Leu Pro Pro Phe Ser Leu Ser Leu

1

5

<210> 208

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 208

Ser Leu Pro Leu Phe Leu Pro Pro Phe Leu

1

5

10

<210> 209

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 209

Gly Leu Tyr Phe Leu Tyr Ser Met Pro Val

1

5

10

<210> 210

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 210

Phe Val Gly Gly His Val Gly Trp Pro Thr

1 5 10

<210> 211

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 211

Arg Leu His Asn Asp Arg Val Tyr Tyr Val
1 5 10

<210> 212

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 212

Tyr Ile Gly Glu Asn Leu Gln Leu Leu Val
1 5 10

<210> 213

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 213

Tyr Val Ser Glu Lys Ile Met Lys Leu
1 5

<210> 214

<211> 335

<212> PRT

<213> Homo sapiens

<400> 214

Met Gly Lys Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg
1 5 10 15

Leu Val Thr Arg Ala Ala Phe Asn Ser Gly Lys Val Asp Ile Val Ala
20 25 30

Ile Asn Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln
35 40 45

Tyr Asp Ser Thr His Gly Lys Phe His Gly Thr Val Lys Ala Glu Asn
50 55 60

Gly Lys Leu Val Ile Asn Gly Asn Pro Ile Thr Ile Phe Gln Glu Arg
65 70 75 80

Asp Pro Ser Lys Ile Lys Trp Gly Asp Ala Gly Ala Glu Tyr Val Val
85 90 95

Glu Ser Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu
100 105 110

Gln Gly Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala
115 120 125

Pro Met Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu
130 135 140

Lys Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu
145 150 155 160

Ala Lys Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr
165 170 175

Thr Val His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser
180 185 190

Gly Lys Leu Trp Arg Asp Gly Arg Gly Ala Leu Gln Asn Ile Ile Pro
195 200 205

Ala Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu
210 215 220

Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Ala Asn Val
 225 230 235 240

Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp
 245 250 255

Asp Ile Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly
 260 265 270

Ile Leu Gly Tyr Thr Glu His Gln Val Val Ser Ser Asp Phe Asn Ser
 275 280 285

Asp Thr His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn
 290 295 300

Asp His Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Phe Gly Tyr
 305 310 315 320

Ser Asn Arg Val Val Asp Leu Met Ala His Met Ala Ser Lys Glu
 325 330 335

<210> 215

<211> 599

<212> PRT

<213> Homo sapiens

<400> 215

Met Ala Asp Lys Leu Thr Arg Ile Ala Ile Val Asn His Asp Lys Cys
 1 5 10 15

Lys Pro Lys Lys Cys Arg Gln Glu Cys Lys Lys Ser Cys Pro Val Val
 20 25 30

Arg Met Gly Lys Leu Cys Ile Glu Val Thr Pro Gln Ser Lys Ile Ala
 35 40 45

Trp Ile Ser Glu Thr Leu Cys Ile Gly Cys Gly Ile Cys Ile Lys Lys
 50 55 60

Cys Pro Phe Gly Ala Leu Ser Ile Val Asn Leu Pro Ser Asn Leu Glu
 65 70 75 80

Lys Glu Thr Thr His Arg Tyr Cys Ala Asn Ala Phe Lys Leu His Arg
 85 90 95

Leu Pro Ile Pro Arg Pro Gly Glu Val Leu Gly Leu Val Gly Thr Asn
 100 105 110

Gly	Ile	Gly	Lys	Ser	Thr	Ala	Leu	Lys	Ile	Leu	Ala	Gly	Lys	Gln	Lys	115	120	125
Pro	Asn	Leu	Gly	Lys	Tyr	Asp	Asp	Pro	Pro	Asp	Trp	Gln	Glu	Ile	Leu	130	135	140
Thr	Tyr	Phe	Arg	Gly	Ser	Glu	Leu	Gln	Asn	Tyr	Phe	Thr	Lys	Ile	Leu	145	150	155
Glu	Asp	Asp	Leu	Lys	Ala	Ile	Ile	Lys	Pro	Gln	Tyr	Val	Asp	Gln	Ile	165	170	175
Pro	Lys	Ala	Ala	Lys	Gly	Thr	Val	Gly	Ser	Ile	Leu	Asp	Arg	Lys	Asp	180	185	190
Glu	Thr	Lys	Thr	Gln	Ala	Ile	Val	Cys	Gln	Gln	Leu	Asp	Leu	Thr	His	195	200	205
Leu	Lys	Glu	Arg	Asn	Val	Glu	Asp	Leu	Ser	Gly	Gly	Glu	Leu	Gln	Arg	210	215	220
Phe	Ala	Cys	Ala	Val	Val	Cys	Ile	Gln	Lys	Ala	Asp	Ile	Phe	Met	Phe	225	230	235
Asp	Glu	Pro	Ser	Ser	Tyr	Leu	Asp	Val	Lys	Gln	Arg	Leu	Lys	Ala	Ala	245	250	255
Ile	Thr	Ile	Arg	Ser	Leu	Ile	Asn	Pro	Asp	Arg	Tyr	Ile	Ile	Val	Val	260	265	270
Glu	His	Asp	Leu	Ser	Val	Leu	Asp	Tyr	Leu	Ser	Asp	Phe	Ile	Cys	Cys	275	280	285
Leu	Tyr	Gly	Val	Pro	Ser	Ala	Tyr	Gly	Val	Val	Thr	Met	Pro	Phe	Ser	290	295	300
Val	Arg	Glu	Gly	Ile	Asn	Ile	Phe	Leu	Asp	Gly	Tyr	Val	Pro	Thr	Glu	305	310	315
Asn	Leu	Arg	Phe	Arg	Asp	Ala	Ser	Leu	Val	Phe	Lys	Val	Ala	Glu	Thr	325	330	335
Ala	Asn	Glu	Glu	Glu	Val	Lys	Lys	Met	Cys	Met	Tyr	Lys	Tyr	Pro	Gly	340	345	350
Met	Lys	Lys	Lys	Met	Gly	Glu	Phe	Glu	Leu	Ala	Ile	Val	Ala	Gly	Glu	355	360	365

Phe Thr Asp Ser Glu Ile Met Val Met Leu Gly Glu Asn Gly Thr Gly
 370 375 380

Lys Thr Thr Phe Ile Arg Met Leu Ala Gly Arg Leu Lys Pro Asp Glu
 385 390 395 400

Gly Gly Glu Val Pro Val Leu Asn Val Ser Tyr Lys Pro Gln Lys Ile
 405 410 415

Ser Pro Lys Ser Thr Gly Ser Val Arg Gln Leu Leu His Glu Lys Ile
 420 425 430

Arg Asp Ala Tyr Thr His Pro Gln Phe Val Thr Asp Val Met Lys Pro
 435 440 445

Leu Gln Ile Glu Asn Ile Ile Asp Gln Glu Val Gln Thr Leu Ser Gly
 450 455 460

Gly Glu Leu Gln Arg Val Ala Leu Ala Leu Cys Leu Gly Lys Pro Ala
 465 470 475 480

Asp Val Tyr Leu Ile Asp Glu Pro Ser Ala Tyr Leu Asp Ser Glu Gln
 485 490 495

Arg Leu Met Ala Ala Arg Val Val Lys Arg Phe Ile Leu His Ala Lys
 500 505 510

Lys Thr Ala Phe Val Val Glu His Asp Phe Ile Met Ala Thr Tyr Leu
 515 520 525

Ala Asp Arg Val Ile Val Phe Asp Gly Val Pro Ser Lys Asn Thr Val
 530 535 540

Ala Asn Ser Pro Gln Thr Leu Leu Ala Gly Met Asn Lys Phe Leu Ser
 545 550 555 560

Gln Leu Glu Ile Thr Phe Arg Arg Asp Pro Asn Asn Tyr Arg Pro Arg
 565 570 575

Ile Asn Lys Leu Asn Ser Ile Lys Asp Val Glu Gln Lys Lys Ser Gly
 580 585 590

Asn Tyr Phe Phe Leu Asp Asp
 595

<211> 101
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ser	Asp	Gln	Glu	Ala	Lys	Pro	Ser	Thr	Glu	Asp	Leu	Gly	Asp	Lys
1				5					10					15	
Lys	Glu	Gly	Glu	Tyr	Ile	Lys	Leu	Lys	Val	Ile	Gly	Gln	Asp	Ser	Ser
			20					25					30		
Glu	Ile	His	Phe	Lys	Val	Lys	Met	Thr	Thr	His	Leu	Lys	Lys	Leu	Lys
			35				40					45			
Glu	Ser	Tyr	Cys	Gln	Arg	Gln	Gly	Val	Pro	Met	Asn	Ser	Leu	Arg	Phe
	50					55					60				
Leu	Phe	Glu	Gly	Gln	Arg	Ile	Ala	Asp	Asn	His	Thr	Pro	Lys	Glu	Leu
65					70					75					80
Gly	Met	Glu	Glu	Glu	Asp	Val	Ile	Glu	Val	Tyr	Gln	Glu	Gln	Thr	Gly
				85					90					95	
Gly	His	Ser	Thr	Val											
				100											

<210> 217
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 217

Met	Lys	Leu	Asn	Ile	Ser	Phe	Pro	Ala	Thr	Gly	Cys	Gln	Lys	Leu	Ile
1				5						10				15	
Glu	Val	Asp	Asp	Glu	Arg	Lys	Leu	Arg	Thr	Phe	Tyr	Glu	Lys	Arg	Met
			20					25					30		
Ala	Thr	Glu	Val	Ala	Ala	Asp	Ala	Leu	Gly	Glu	Glu	Trp	Lys	Gly	Tyr
			35				40					45			
Val	Val	Arg	Ile	Ser	Gly	Gly	Asn	Asp	Lys	Gln	Gly	Phe	Pro	Met	Lys
	50					55					60				
Gln	Gly	Val	Leu	Thr	His	Gly	Arg	Val	Arg	Leu	Leu	Leu	Ser	Lys	Gly
65					70				75						80

His	Ser	Cys	Tyr	Arg	Pro	Arg	Arg	Thr	Gly	Glu	Arg	Lys	Arg	Lys	Ser
				85									95		
Val	Arg	Gly	Cys	Ile	Val	Asp	Ala	Asn	Leu	Ser	Val	Leu	Asn	Leu	Val
				100									110		
Ile	Val	Lys	Lys	Gly	Glu	Lys	Asp	Ile	Pro	Gly	Leu	Thr	Asp	Thr	Thr
				115									125		
Val	Pro	Arg	Arg	Leu	Gly	Pro	Lys	Arg	Ala	Ser	Arg	Ile	Arg	Lys	Leu
				130									140		
Phe	Asn	Leu	Ser	Lys	Glu	Asp	Asp	Val	Arg	Gln	Tyr	Val	Val	Arg	Lys
145				150			155						160		
Pro	Leu	Asn	Lys	Glu	Gly	Lys	Lys	Pro	Arg	Thr	Lys	Ala	Pro	Lys	Ile
				165									175		
Gln	Arg	Leu	Val	Thr	Pro	Arg	Val	Leu	Gln	His	Lys	Arg	Arg	Arg	Ile
				180									190		
Ala	Leu	Lys	Lys	Gln	Arg	Thr	Lys	Lys	Asn	Lys	Glu	Glu	Ala	Ala	Glu
				195									205		
Tyr	Ala	Lys	Leu	Leu	Ala	Lys	Arg	Met	Lys	Glu	Ala	Lys	Glu	Lys	Arg
				210									220		
Gln	Glu	Gln	Ile	Ala	Lys	Arg	Arg	Arg	Leu	Ser	Ser	Leu	Arg	Ala	Ser
225				230			235						240		
Thr	Ser	Lys	Ser	Glu	Ser	Ser	Gln	Lys							
				245											

<210> 218

<211> 184

<212> PRT

<213> Homo sapiens

<400> 218

Met Arg Glu Tyr Lys Leu Val Val Leu Gly Ser Gly Gly Val Gly Lys
1 5 10 15

Ser Ala Leu Thr Val Gln Phe Val Gln Gly Ile Phe Val Glu Lys Tyr
20 25 30

Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Glu Val Asp Ala
35 40 45

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Gln Gln Cys Met Leu Glu Ile Leu Asp Thr Ala Gly Thr Glu Gln Phe
50 55 60

Thr Ala Met Arg Asp Leu Tyr Met Lys Asn Gly Gln Gly Phe Ala Leu
65 70 75 80

Val Tyr Ser Ile Thr Ala Gln Ser Thr Phe Asn Asp Leu Gln Asp Leu
85 90 95

Arg Glu Gln Ile Leu Arg Val Lys Asp Thr Asp Asp Val Pro Met Ile
100 105 110

Leu Val Gly Asn Lys Cys Asp Leu Glu Asp Glu Arg Val Val Gly Lys
115 120 125

Glu Gln Gly Gln Asn Leu Ala Arg Gln Trp Asn Asn Cys Ala Phe Leu
130 135 140

Glu Ser Ser Ala Lys Ser Lys Ile Asn Val Asn Glu Ile Phe Tyr Asp
145 150 155 160

Leu Val Arg Gln Ile Asn Arg Lys Thr Pro Val Pro Gly Lys Ala Arg
165 170 175

Lys Lys Ser Ser Cys Gln Leu Leu
180

<210> 219

<211> 162

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Glu Thr Ile Met Asn Gln Glu Lys Leu Ala Lys Leu Gln Ala
1 5 10 15

Gln Val Arg Ile Gly Gly Lys Gly Thr Ala Arg Arg Lys Lys Lys Val
20 25 30

Val His Arg Thr Ala Thr Ala Asp Asp Lys Lys Leu Gln Phe Ser Leu
35 40 45

Lys Lys Leu Gly Val Asn Asn Ile Ser Gly Ile Glu Glu Val Asn Met
50 55 60

Phe Thr Asn Gln Gly Thr Val Ile His Phe Asn Asn Pro Lys Val Gln

[illegible]

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<210> 220
<211> 180
<212> PRT
<213> Homo sapiens
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<400> 220

Met	Arg	Pro	Leu	Thr	Glu	Glu	Glu	Thr	Arg	Val	Met	Phe	Glu	Lys	Ile
1				5					10					15	
Ala	Lys	Tyr	Ile	Gly	Glu	Asn	Leu	Gln	Leu	Leu	Val	Asp	Arg	Pro	Asp
			20					25					30		
Gly	Thr	Tyr	Cys	Phe	Arg	Leu	His	Asn	Asp	Arg	Val	Tyr	Tyr	Val	Ser
		35					40					45			
Glu	Lys	Ile	Met	Lys	Leu	Ala	Ala	Asn	Ile	Ser	Gly	Asp	Lys	Leu	Val
	50					55					60				
Ser	Leu	Gly	Thr	Cys	Phe	Gly	Lys	Phe	Thr	Lys	Thr	His	Lys	Phe	Arg
65					70					75					80
Leu	His	Val	Thr	Ala	Leu	Asp	Tyr	Leu	Ala	Pro	Tyr	Ala	Lys	Tyr	Lys
				85					90					95	
Val	Trp	Ile	Lys	Pro	Gly	Ala	Glu	Gln	Ser	Phe	Leu	Tyr	Gly	Asn	His
			100					105						110	

Val Leu Lys Ser Gly Leu Gly Arg Ile Thr Glu Asn Thr Ser Gln Tyr
 115 120 125

Gln Gly Val Val Val Tyr Ser Met Ala Asp Ile Pro Leu Gly Phe Gly
 130 135 140

Val Ala Ala Lys Ser Thr Gln Asp Cys Arg Lys Val Asp Pro Met Ala
 145 150 155 160

Ile Val Val Phe His Gln Ala Asp Ile Gly Glu Tyr Val Arg His Glu
 165 170 175

Glu Thr Leu Thr
 180

<210> 221

<211> 166

<212> PRT

<213> Homo sapiens

<400> 221

Met Ala Ala Thr Met Phe Arg Ala Thr Leu Arg Gly Trp Arg Thr Gly
 1 5 10 15

Val Gln Arg Gly Cys Gly Leu Arg Leu Leu Ser Gln Thr Gln Gly Pro
 20 25 30

Pro Asp Tyr Pro Arg Phe Val Glu Ser Val Asp Glu Tyr Gln Phe Val
 35 40 45

Glu Arg Leu Leu Pro Ala Thr Arg Ile Pro Asp Pro Pro Lys His Glu
 50 55 60

His Tyr Pro Thr Pro Ser Gly Trp Gln Pro Pro Arg Asp Pro Pro Pro
 65 70 75 80

Asn Leu Pro Tyr Phe Val Arg Arg Ser Arg Met His Asn Ile Pro Val
 85 90 95

Tyr Lys Asp Ile Thr His Gly Asn Arg Gln Met Thr Val Ile Arg Lys
 100 105 110

Val Glu Gly Asp Ile Trp Ala Leu Gln Lys Asp Val Glu Asp Phe Leu
 115 120 125

Ser Pro Leu Leu Gly Lys Thr Pro Val Thr Gln Val Asn Glu Val Thr
 130 135 140

Gly Thr Leu Arg Ile Lys Gly Tyr Phe Asp Gln Glu Leu Lys Ala Trp
 145 150 155 160

Leu Leu Glu Lys Gly Phe
 165

<210> 222

<211> 194

<212> PRT

<213> Homo sapiens

<400> 222

Met Ala Ala Ser Leu Val Gly Lys Lys Ile Val Phe Val Thr Gly Asn
 1 5 10 15

Ala Lys Lys Leu Glu Glu Val Val Gln Ile Leu Gly Asp Lys Phe Pro
 20 25 30

Cys Thr Leu Val Ala Gln Lys Ile Asp Leu Pro Glu Tyr Gln Gly Glu
 35 40 45

Pro Asp Glu Ile Ser Ile Gln Lys Cys Gln Glu Ala Val Arg Gln Val
 50 55 60

Gln Gly Pro Val Leu Val Glu Asp Thr Cys Leu Cys Phe Asn Ala Leu
 65 70 75 80

Gly Gly Leu Pro Gly Pro Tyr Ile Lys Trp Phe Leu Glu Lys Leu Lys
 85 90 95

Pro Glu Gly Leu His Gln Leu Leu Ala Gly Phe Glu Asp Lys Ser Ala
 100 105 110

Tyr Ala Leu Cys Thr Phe Ala Leu Ser Thr Gly Asp Pro Ser Gln Pro
 115 120 125

Val Arg Leu Phe Arg Gly Arg Thr Ser Gly Arg Ile Val Ala Pro Arg
 130 135 140

Gly Cys Gln Asp Phe Gly Trp Asp Pro Cys Phe Gln Pro Asp Gly Tyr
 145 150 155 160

Glu Gln Thr Tyr Ala Glu Met Pro Lys Ala Glu Lys Asn Ala Val Ser
 165 170 175

His Arg Phe Arg Ala Leu Leu Glu Leu Gln Glu Tyr Phe Gly Ser Leu

180

185

190

Ala Ala

<210> 223

<211> 466

<212> PRT

<213> Homo sapiens

<400> 223

Met Ser Tyr Pro Gly Tyr Pro Pro Thr Gly Tyr Pro Pro Phe Pro Gly
 1 5 10 15

Tyr Pro Pro Ala Gly Gln Glu Ser Ser Phe Pro Pro Ser Gly Gln Tyr
 20 25 30

Pro Tyr Pro Ser Gly Phe Pro Pro Met Gly Gly Gly Ala Tyr Pro Gln
 35 40 45

Val Pro Ser Ser Gly Tyr Pro Gly Ala Gly Gly Tyr Pro Ala Pro Gly
 50 55 60

Gly Tyr Pro Ala Pro Gly Gly Tyr Pro Gly Ala Pro Gln Pro Gly Gly
 65 70 75 80

Ala Pro Ser Tyr Pro Gly Val Pro Pro Gly Gln Gly Phe Gly Val Pro
 85 90 95

Pro Gly Gly Ala Gly Phe Ser Gly Tyr Pro Gln Pro Pro Ser Gln Ser
 100 105 110

Tyr Gly Gly Gly Pro Ala Gln Val Pro Leu Pro Gly Gly Phe Pro Gly
 115 120 125

Gly Gln Met Pro Ser Gln Tyr Pro Gly Gly Gln Pro Thr Tyr Pro Ser
 130 135 140

Gln Pro Ala Thr Val Thr Gln Val Thr Gln Gly Thr Ile Arg Pro Ala
 145 150 155 160

Ala Asn Phe Asp Ala Ile Arg Asp Ala Glu Ile Leu Arg Lys Ala Met
 165 170 175

Lys Gly Phe Gly Thr Asp Glu Gln Ala Ile Val Asp Val Val Ala Asn
 180 185 190

Arg Ser Asn Asp Gln Arg Gln Lys Ile Lys Ala Ala Phe Lys Thr Ser		
195	200	205
Tyr Gly Lys Asp Leu Ile Lys Asp Leu Lys Ser Glu Leu Ser Gly Asn		
210	215	220
Met Glu Glu Leu Ile Leu Ala Leu Phe Met Pro Pro Thr Tyr Tyr Asp		
225	230	235 240
Ala Trp Ser Leu Arg Lys Ala Met Gln Gly Ala Gly Thr Gln Glu Arg		
	245	250 255
Val Leu Ile Glu Ile Leu Cys Thr Arg Thr Asn Gln Glu Ile Arg Glu		
	260	265 270
Ile Val Arg Cys Tyr Gln Ser Glu Phe Gly Arg Asp Leu Glu Lys Asp		
	275	280 285
Ile Arg Ser Asp Thr Ser Gly His Phe Glu Arg Leu Leu Val Ser Met		
	290	295 300
Cys Gln Gly Asn Arg Asp Glu Asn Gln Ser Ile Asn His Gln Met Ala		
305	310	315 320
Gln Glu Asp Ala Gln Arg Leu Tyr Gln Ala Gly Glu Gly Arg Leu Gly		
	325	330 335
Thr Asp Glu Ser Cys Phe Asn Met Ile Leu Ala Thr Arg Ser Phe Pro		
	340	345 350
Gln Leu Arg Ala Thr Met Glu Ala Tyr Ser Arg Met Ala Asn Arg Asp		
	355	360 365
Leu Leu Ser Ser Val Ser Arg Glu Phe Ser Gly Tyr Val Glu Ser Gly		
	370	375 380
Leu Lys Thr Ile Leu Gln Cys Ala Leu Asn Arg Pro Ala Phe Phe Ala		
385	390	395 400
Glu Arg Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp Asp Ser Thr		
	405	410 415
Leu Val Arg Ile Val Val Thr Arg Ser Glu Ile Asp Leu Val Gln Ile		
	420	425 430
Lys Gln Met Phe Ala Gln Met Tyr Gln Lys Thr Leu Gly Thr Met Ile		
	435	440 445

Ala Gly Asp Thr Ser Gly Asp Tyr Arg Arg Leu Leu Leu Ala Ile Val
 450 455 460

Gly Gln
 465

<210> 224
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 224
 Met Val Arg Met Asn Val Leu Ala Asp Ala Leu Lys Ser Ile Asn Asn
 1 5 10 15

Ala Glu Lys Arg Gly Lys Arg Gln Val Leu Ile Arg Pro Cys Ser Lys
 20 25 30

Val Ile Val Arg Phe Leu Thr Val Met Met Lys His Gly Tyr Ile Gly
 35 40 45

Glu Phe Glu Ile Ile Asp Asp His Arg Ala Gly Lys Ile Val Val Asn
 50 55 60

Leu Thr Gly Arg Leu Asn Lys Cys Gly Val Ile Ser Pro Arg Phe Asp
 65 70 75 80

Val Gln Leu Lys Asp Leu Glu Lys Trp Gln Asn Asn Leu Leu Pro Ser
 85 90 95

Arg Gln Phe Gly Phe Ile Val Leu Thr Thr Ser Ala Gly Ile Met Asp
 100 105 110

His Glu Glu Ala Arg Arg Lys His Thr Gly Gly Lys Ile Leu Gly Phe
 115 120 125

Phe Phe
 130

<210> 225
 <211> 192
 <212> PRT
 <213> Homo sapiens

<400> 225
 Met Lys Thr Ile Leu Ser Asn Gln Thr Val Asp Ile Pro Glu Asn Val

81/217

1	5	10	15
Asp Ile Thr Leu Lys Gly Arg Thr Val Ile Val Lys Gly Pro Arg Gly	20	25	30
Thr Leu Arg Arg Asp Phe Asn His Ile Asn Val Glu Leu Ser Leu Leu	35	40	45
Gly Lys Lys Lys Lys Arg Leu Arg Val Asp Lys Trp Trp Gly Asn Arg	50	55	60
Lys Glu Leu Ala Thr Val Arg Thr Ile Cys Ser His Val Gln Asn Met	65	70	75
Ile Lys Gly Val Thr Leu Gly Phe Arg Tyr Lys Met Arg Ser Val Tyr	85	90	95
Ala His Phe Pro Ile Asn Val Val Ile Gln Glu Asn Gly Ser Leu Val	100	105	110
Glu Ile Arg Asn Phe Leu Gly Glu Lys Tyr Ile Arg Arg Val Arg Met	115	120	125
Arg Pro Gly Val Ala Cys Ser Val Ser Gln Ala Gln Lys Asp Glu Leu	130	135	140
Ile Leu Glu Gly Asn Asp Ile Glu Leu Val Ser Asn Ser Ala Ala Leu	145	150	155
Ile Gln Gln Ala Thr Thr Val Lys Asn Lys Asp Ile Arg Lys Phe Leu	165	170	175
Asp Gly Ile Tyr Val Ser Glu Lys Gly Thr Val Gln Gln Ala Asp Glu	180	185	190

<210> 226

<211> 67

<212> PRT

<213> Homo sapiens

<400> 226

Met Leu Leu Tyr Ile Asn Arg Ala Arg Pro Glu Gly Gly Arg Gly Ala	1	5	10	15
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82/217

Gly Ala Glu Gly Arg Ser Asn Gln Ile Ser Asn Phe Leu Leu Ile Ile
20 25 30

Asn Pro Leu Phe Thr Ala Val Ser Val Val Ile Phe Lys Ile Phe Leu
35 40 45

Ile Phe Phe Phe Phe Leu Leu Leu Leu Phe Thr Ser Cys Val Tyr Val
50 55 60

Gly Asn Leu
65

<210> 227

<211> 66

<212> PRT

<213> Homo sapiens

<400> 227

Met His Phe His Asn Ile Cys Leu Leu Glu Arg Ser Ile Ile Ser Glu
1 5 10 15

Lys Tyr Gln Val Phe Ile Lys Phe Leu Gly Met Ala Asp Ser Gln Asn
20 25 30

Met Leu Val Ser Leu Gln Tyr Ser Ser Arg Arg Ala Asn Gln Gly Arg
35 40 45

Ala Gly Met Arg Ser Asp Ile Cys Val Thr Lys Ser Ile Phe Leu Ile
50 55 60

Ser Leu
65

<210> 228

<211> 145

<212> PRT

<213> Homo sapiens

<400> 228

Met Ile Leu Gln Cys Ser Ile Glu Met Pro Asn Ile Ser Tyr Ala Trp
1 5 10 15

Lys Glu Leu Lys Glu Gln Leu Gly Glu Glu Ile Asp Ser Lys Val Lys
20 25 30

Gly Met Val Phe Leu Lys Gly Lys Leu Gly Val Cys Phe Asp Val Pro

35	40	45
Thr Ala Ser Val Thr Glu Ile Gln Glu Lys Trp His Asp Ser Arg Arg		
50	55	60
Trp Gln Leu Ser Val Ala Thr Glu Gln Pro Glu Leu Glu Gly Pro Arg		
65	70	75
Glu Gly Tyr Gly Gly Phe Arg Gly Gln Arg Glu Gly Ser Arg Gly Phe		
	85	90
Arg Gly Gln Arg Asp Gly Asn Arg Arg Phe Arg Gly Gln Arg Glu Gly		
	100	105
Ser Arg Gly Pro Arg Gly Gln Arg Ser Gly Gly Gly Asn Lys Ser Asn		
	115	120
Arg Ser Gln Asn Lys Gly Gln Lys Arg Ser Phe Ser Lys Ala Phe Gly		
	130	135
		140

Gln
145

<210> 229
 <211> 49
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Arg Asn Ser Ala Thr Phe Lys Ser Phe Glu Asp Arg Val Gly Thr
 1 5 10 15
 Ile Lys Ser Lys Val Val Gly Asp Arg Glu Asn Gly Ser Asp Asn Leu
 20 25 30
 Pro Ser Ser Ala Gly Ser Gly Asp Lys Pro Leu Ser Asp Pro Ala Pro
 35 40 45

Phe

<210> 230
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 230

Met Gly Ile Ser Arg Asp Asn Trp His Lys Arg Arg Lys Thr Gly Gly
 1 5 10 15

Lys Arg Lys Pro Tyr His Lys Lys Arg Lys Tyr Glu Leu Gly Arg Pro
 20 25 30

Ala Ala Asn Thr Lys Ile Gly Pro Arg Arg Ile His Thr Val Arg Val
 35 40 45

Arg Gly Gly Asn Lys Lys Tyr Arg Ala Leu Arg Leu Asp Val Gly Asn
 50 55 60

Phe Ser Trp Gly Ser Glu Cys Cys Thr Arg Lys Thr Arg Ile Ile Asp
 65 70 75 80

Val Val Tyr Asn Ala Ser Asn Asn Glu Leu Val Arg Thr Lys Thr Leu
 85 90 95

Val Lys Asn Cys Ile Val Leu Ile Asp Ser Thr Pro Tyr Arg Gln Trp
 100 105 110

Tyr Glu Ser His Tyr Ala Leu Pro Leu Gly Arg Lys Lys Gly Ala Lys
 115 120 125

Leu Thr Pro Glu Glu Glu Glu Ile Leu Asn Lys Lys Arg Ser Lys Lys
 130 135 140

Ile Gln Lys Lys Tyr Asp Glu Arg Lys Lys Asn Ala Lys Ile Ser Ser
 145 150 155 160

Leu Leu Glu Glu Gln Phe Gln Gln Gly Lys Leu Leu Ala Cys Ile Ala
 165 170 175

Ser Arg Pro Gly Gln Cys Gly Arg Ala Asp Gly Tyr Val Leu Glu Gly
 180 185 190

Lys Glu Leu Glu Phe Tyr Leu Arg Lys Ile Lys Ala Arg Lys Gly Lys
 195 200 205

<210> 231

<211> 183

<212> PRT

<213> Homo sapiens

<400> 231

Met Thr Thr Ala Ser Thr Ser Gln Val Arg Gln Asn Tyr His Gln Asp
 1 5 10 15

Ser Glu Ala Ala Ile Asn Arg Gln Ile Asn Leu Glu Leu Tyr Ala Ser
 20 25 30

Tyr Val Tyr Leu Ser Met Ser Tyr Tyr Phe Asp Arg Asp Asp Val Ala
 35 40 45

Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
 50 55 60

Glu His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
 65 70 75 80

Ile Phe Leu Gln Asp Ile Lys Lys Pro Asp Cys Asp Asp Trp Glu Ser
 85 90 95

Gly Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Asn Val Asn
 100 105 110

Gln Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro
 115 120 125

His Leu Cys Asp Phe Ile Glu Thr His Tyr Leu Asn Glu Gln Val Lys
 130 135 140

Ala Ile Lys Glu Leu Gly Asp His Val Thr Asn Leu Arg Lys Met Gly
 145 150 155 160

Ala Pro Glu Ser Gly Leu Ala Glu Tyr Leu Phe Asp Lys His Thr Leu
 165 170 175

Gly Asp Ser Asp Asn Glu Ser
 180

<210> 232

<211> 403

<212> PRT

<213> Homo sapiens

<400> 232

Met Ser His Arg Lys Phe Ser Ala Pro Arg His Gly Ser Leu Gly Phe
 1 5 10 15

Leu Pro Arg Lys Arg Ser Ser Arg His Arg Gly Lys Val Lys Ser Phe
 20 25 30

Pro Lys Asp Asp Pro Ser Lys Pro Val His Leu Thr Ala Phe Leu Gly
 35 40 45

Tyr Lys Ala Gly Met Thr His Ile Val Arg Glu Val Asp Arg Pro Gly
 50 55 60

Ser Lys Val Asn Lys Lys Glu Val Val Glu Ala Val Thr Ile Val Glu
 65 70 75 80

Thr Pro Pro Met Val Val Val Gly Ile Val Gly Tyr Val Glu Thr Pro
 85 90 95

Arg Gly Leu Arg Thr Phe Lys Thr Val Phe Ala Glu His Ile Ser Asp
 100 105 110

Glu Cys Lys Arg Arg Phe Tyr Lys Asn Trp His Lys Ser Lys Lys Lys
 115 120 125

Ala Phe Thr Lys Tyr Cys Lys Lys Trp Gln Asp Glu Asp Gly Lys Lys
 130 135 140

Gln Leu Glu Lys Asp Phe Ser Ser Met Lys Lys Tyr Cys Gln Val Ile
 145 150 155 160

Arg Val Ile Ala His Thr Gln Met Arg Leu Leu Pro Leu Arg Gln Lys
 165 170 175

Lys Ala His Leu Met Glu Ile Gln Val Asn Gly Gly Thr Val Ala Glu
 180 185 190

Lys Leu Asp Trp Ala Arg Glu Arg Leu Glu Gln Gln Val Pro Val Asn
 195 200 205

Gln Val Phe Gly Gln Asp Glu Met Ile Asp Val Ile Gly Val Thr Lys
 210 215 220

Gly Lys Gly Tyr Lys Gly Val Thr Ser Arg Trp His Thr Lys Lys Leu
 225 230 235 240

Pro Arg Lys Thr His Arg Gly Leu Arg Lys Val Ala Cys Ile Gly Ala
 245 250 255

Trp His Pro Ala Arg Val Ala Phe Ser Val Ala Arg Ala Gly Gln Lys
 260 265 270

87/217

Gly Tyr His His Arg Thr Glu Ile Asn Lys Lys Ile Tyr Lys Ile Gly
275 280 285

Gln Gly Tyr Leu Ile Lys Asp Gly Lys Leu Ile Lys Asn Asn Ala Ser
290 295 300

Thr Asp Tyr Asp Leu Ser Asp Lys Ser Ile Asn Pro Leu Gly Gly Phe
305 310 315 320

Val His Tyr Gly Glu Val Thr Asn Asp Phe Val Met Leu Lys Gly Cys
325 330 335

Val Val Gly Thr Lys Lys Arg Val Leu Thr Leu Arg Lys Ser Leu Leu
340 345 350

Val Gln Thr Lys Arg Arg Ala Leu Glu Lys Ile Asp Leu Lys Phe Ile
355 360 365

Asp Thr Thr Ser Lys Phe Gly His Gly Arg Phe Gln Thr Met Glu Glu
370 375 380

Lys Lys Ala Phe Met Gly Pro Leu Lys Lys Asp Arg Ile Ala Lys Glu
385 390 395 400

Glu Gly Ala

<210> 233
<211> 480
<212> PRT
<213> Homo sapiens

<400> 233
Met Ala Val Ala Arg Ala Ala Leu Gly Pro Leu Val Thr Gly Leu Tyr
1 5 10 15

Asp Val Gln Ala Phe Lys Phe Gly Asp Phe Val Leu Lys Ser Gly Leu
20 25 30

Ser Ser Pro Ile Tyr Ile Asp Leu Arg Gly Ile Val Ser Arg Pro Arg
35 40 45

Leu Leu Ser Gln Val Ala Asp Ile Leu Phe Gln Thr Ala Gln Asn Ala
50 55 60

Gly Ile Ser Phe Asp Thr Val Cys Gly Val Pro Tyr Thr Ala Leu Pro
65 70 75 80

Leu	Ala	Thr	Val	Ile	Cys	Ser	Thr	Asn	Gln	Ile	Pro	Met	Leu	Ile	Arg	85	90	95	
Arg	Lys	Glu	Thr	Lys	Asp	Tyr	Gly	Thr	Lys	Arg	Leu	Val	Glu	Gly	Thr	100	105	110	
Ile	Asn	Pro	Gly	Glu	Thr	Cys	Leu	Ile	Ile	Glu	Asp	Val	Val	Thr	Ser	115	120	125	
Gly	Ser	Ser	Val	Leu	Glu	Thr	Val	Glu	Val	Leu	Gln	Lys	Glu	Gly	Leu	130	135	140	
Lys	Val	Thr	Asp	Ala	Ile	Val	Leu	Leu	Asp	Arg	Glu	Gln	Gly	Gly	Lys	145	150	155	160
Asp	Lys	Leu	Gln	Ala	His	Gly	Ile	Arg	Leu	His	Ser	Val	Cys	Thr	Leu	165	170	175	
Ser	Lys	Met	Leu	Glu	Ile	Leu	Glu	Gln	Gln	Lys	Lys	Val	Asp	Ala	Glu	180	185	190	
Thr	Val	Gly	Arg	Val	Lys	Arg	Phe	Ile	Gln	Glu	Asn	Val	Phe	Val	Ala	195	200	205	
Ala	Asn	His	Asn	Gly	Ser	Pro	Leu	Ser	Ile	Lys	Glu	Ala	Pro	Lys	Glu	210	215	220	
Leu	Ser	Phe	Gly	Ala	Arg	Ala	Glu	Leu	Pro	Arg	Ile	His	Pro	Val	Ala	225	230	235	240
Ser	Lys	Leu	Leu	Arg	Leu	Met	Gln	Lys	Lys	Glu	Thr	Asn	Leu	Cys	Leu	245	250	255	
Ser	Ala	Asp	Val	Ser	Leu	Ala	Arg	Glu	Leu	Leu	Gln	Leu	Ala	Asp	Ala	260	265	270	
Leu	Gly	Pro	Ser	Ile	Cys	Met	Leu	Lys	Thr	His	Val	Asp	Ile	Leu	Asn	275	280	285	
Asp	Phe	Thr	Leu	Asp	Val	Met	Lys	Glu	Leu	Ile	Thr	Leu	Ala	Lys	Cys	290	295	300	
His	Glu	Phe	Leu	Ile	Phe	Glu	Asp	Arg	Lys	Phe	Ala	Asp	Ile	Gly	Asn	305	310	315	320
Thr	Val	Lys	Lys	Gln	Tyr	Glu	Gly	Gly	Ile	Phe	Lys	Ile	Ala	Ser	Trp	325	330	335	

Ala Asp Leu Val Asn Ala His Val Val Pro Gly Ser Gly Val Val Lys
 340 345 350

Gly Leu Gln Glu Val Gly Leu Pro Leu His Arg Gly Cys Leu Leu Ile
 355 360 365

Ala Glu Met Ser Ser Thr Gly Ser Leu Ala Thr Gly Asp Tyr Thr Arg
 370 375 380

Ala Ala Val Arg Met Ala Glu Glu His Ser Glu Phe Val Val Gly Phe
 385 390 395 400

Ile Ser Gly Ser Arg Val Ser Met Lys Pro Glu Phe Leu His Leu Thr
 405 410 415

Pro Gly Val Gln Leu Glu Ala Gly Gly Asp Asn Leu Gly Gln Gln Tyr
 420 425 430

Asn Ser Pro Gln Glu Val Ile Gly Lys Arg Gly Ser Asp Ile Ile Ile
 435 440 445

Val Gly Arg Gly Ile Ile Ser Ala Ala Asp Arg Leu Glu Ala Ala Glu
 450 455 460

Met Tyr Arg Lys Ala Ala Trp Glu Ala Tyr Leu Ser Arg Leu Gly Val
 465 470 475 480

<210> 234

<211> 86

<212> PRT

<213> Homo sapiens

<400> 234

Met Tyr Leu Tyr Leu Ile Ser Ser Cys Ile Lys Pro Ile Asn Leu Cys
 1 5 10 15

Tyr Cys Ser Ser Asn Leu Met His Thr Val Ile Ser Cys Tyr Ile Cys
 20 25 30

Lys Val Gly Asn Cys Phe Leu Ser Tyr Arg Ser Phe Lys Leu His Phe
 35 40 45

Cys Ala Val Glu Thr Lys Val Gly Tyr Ser Leu Cys His Val Asp Val

90/217

50 55 60
Gln Phe Leu Lys Leu Phe Tyr Lys Thr Leu Ile Ile Lys Pro Leu Asn
65 70 75 80

Leu Lys Lys Lys Lys Lys
85

<210> 235
<211> 54
<212> PRT
<213> Homo sapiens

<400> 235
Met Leu Cys Gly Asn Ile Tyr Pro Ile Asp His Pro Ile Leu Met Cys
1 5 10 15

Leu Trp Leu Ser Asp Gln Leu Gln Asn Asn Cys Val Val Ile Leu Cys
20 25 30

Pro Lys Leu Leu Ile Asn Phe Tyr Leu Gln Ile Glu Lys Glu Gly Pro
35 40 45

Cys Lys Glu Asn Gly Lys
50

<210> 236
<211> 672
<212> PRT
<213> Homo sapiens

<400> 236
Met Gly Val Gly Arg Leu Asp Met Tyr Val Leu His Pro Pro Ser Ala
1 5 10 15

Gly Ala Glu Arg Thr Leu Ala Ser Val Cys Ala Leu Leu Val Trp His
20 25 30

Pro Ala Gly Pro Gly Glu Lys Val Val Arg Val Leu Phe Pro Gly Cys
35 40 45

Thr Pro Pro Ala Cys Leu Leu Asp Gly Leu Val Arg Leu Gln His Leu
50 55 60

Arg Phe Leu Arg Glu Pro Val Val Thr Pro Gln Asp Leu Glu Gly Pro
65 70 75 80

Gly Arg Ala Glu Ser Lys Glu Ser Val Gly Ser Arg Asp Ser Ser Lys	85	90	95
Arg Glu Gly Leu Leu Ala Thr His Pro Arg Pro Gly Gln Glu Arg Pro	100	105	110
Gly Val Ala Arg Lys Glu Pro Ala Arg Ala Glu Ala Pro Arg Lys Thr	115	120	125
Glu Lys Glu Ala Lys Ala Pro Arg Glu Leu Lys Lys Asp Pro Lys Pro	130	135	140
Ser Val Ser Arg Thr Gln Pro Arg Glu Val Arg Arg Ala Ala Ser Ser	145	150	155
Val Pro Asn Leu Lys Lys Thr Asn Ala Gln Ala Ala Pro Lys Pro Arg	165	170	175
Lys Ala Pro Ser Thr Ser His Ser Gly Phe Pro Pro Val Ala Asn Gly	180	185	190
Pro Arg Ser Pro Pro Ser Leu Arg Cys Gly Glu Ala Ser Pro Pro Ser	195	200	205
Ala Ala Cys Gly Ser Pro Ala Ser Gln Leu Val Ala Thr Pro Ser Leu	210	215	220
Glu Leu Gly Pro Ile Pro Ala Gly Glu Glu Lys Ala Leu Glu Leu Pro	225	230	235
Leu Ala Ala Ser Ser Ile Pro Arg Pro Arg Thr Pro Ser Pro Glu Ser	245	250	255
His Arg Ser Pro Ala Glu Gly Ser Glu Arg Leu Ser Leu Ser Pro Leu	260	265	270
Arg Gly Gly Glu Ala Gly Pro Asp Ala Ser Pro Thr Val Thr Thr Pro	275	280	285
Thr Val Thr Thr Pro Ser Leu Pro Ala Glu Val Gly Ser Pro His Ser	290	295	300
Thr Glu Val Asp Glu Ser Leu Ser Val Ser Phe Glu Gln Val Leu Pro	305	310	315
Pro Ser Ala Pro Thr Ser Glu Ala Gly Leu Ser Leu Pro Leu Arg Gly	325	330	335

Pro Arg Ala Arg Arg Ser Ala Ser Pro His Asp Val Asp Leu Cys Leu
 340 345 350

Val Ser Pro Cys Glu Phe Glu His Arg Lys Ala Val Pro Met Ala Pro
 355 360 365

Ala Pro Ala Ser Pro Gly Ser Ser Asn Asp Ser Ser Ala Arg Ser Gln
 370 375 380

Glu Arg Ala Gly Gly Leu Gly Ala Glu Glu Thr Pro Pro Thr Ser Val
 385 390 395 400

Ser Glu Ser Leu Pro Thr Leu Ser Asp Ser Asp Pro Val Pro Leu Ala
 405 410 415

Pro Gly Ala Ala Asp Ser Asp Glu Asp Thr Glu Gly Phe Gly Val Pro
 420 425 430

Arg His Asp Pro Leu Pro Asp Pro Leu Lys Val Pro Pro Pro Leu Pro
 435 440 445

Asp Pro Ser Ser Ile Cys Met Val Asp Pro Glu Met Leu Pro Pro Lys
 450 455 460

Thr Ala Arg Gln Thr Glu Asn Val Ser Arg Thr Arg Lys Pro Leu Ala
 465 470 475 480

Arg Pro Asn Ser Arg Ala Ala Ala Pro Lys Ala Thr Pro Val Ala Ala
 485 490 495

Ala Lys Thr Lys Gly Leu Ala Gly Gly Asp Arg Ala Ser Arg Pro Leu
 500 505 510

Ser Ala Arg Ser Glu Pro Ser Glu Lys Gly Gly Arg Ala Pro Leu Ser
 515 520 525

Arg Lys Ser Ser Thr Pro Lys Thr Ala Thr Arg Gly Pro Ser Gly Ser
 530 535 540

Ala Ser Ser Arg Pro Gly Val Ser Ala Thr Pro Pro Lys Ser Pro Val
 545 550 555 560

Tyr Leu Asp Leu Ala Tyr Leu Pro Ser Gly Ser Ser Ala His Leu Val
 565 570 575

Asp Glu Glu Phe Phe Gln Arg Val Arg Ala Leu Cys Tyr Val Ile Ser
 580 585 590

Gly Gln Asp Gln Arg Lys Glu Glu Gly Met Arg Ala Val Leu Asp Ala
 595 600 605

Leu Leu Ala Ser Lys Gln His Trp Asp Arg Asp Leu Gln Val Thr Leu
 610 615 620

Ile Pro Thr Phe Asp Ser Val Ala Met His Thr Trp Tyr Ala Glu Thr
 625 630 635 640

His Ala Arg His Gln Ala Leu Gly Ile Thr Val Leu Gly Ser Asn Ser
 645 650 655

Met Val Ser Met Gln Asp Asp Ala Phe Pro Ala Cys Lys Val Glu Phe
 660 665 670

<210> 237

<211> 222

<212> PRT

<213> Homo sapiens

<400> 237

Met Asn Ser Asn Val Glu Asn Leu Pro Pro His Ile Ile Arg Leu Val
 1 5 10 15

Tyr Lys Glu Val Thr Thr Leu Thr Ala Asp Pro Pro Asp Gly Ile Lys
 20 25 30

Val Phe Pro Asn Glu Glu Asp Leu Thr Asp Leu Gln Val Thr Ile Glu
 35 40 45

Gly Pro Glu Gly Thr Pro Tyr Ala Gly Gly Leu Phe Arg Met Lys Leu
 50 55 60

Leu Leu Gly Lys Asp Phe Pro Ala Ser Pro Pro Lys Gly Tyr Phe Leu
 65 70 75 80

Thr Lys Ile Phe His Pro Asn Val Gly Ala Asn Gly Glu Ile Cys Val
 85 90 95

Asn Val Leu Lys Arg Asp Trp Thr Ala Glu Leu Gly Ile Arg His Val
 100 105 110

Leu Leu Thr Ile Lys Cys Leu Leu Ile His Pro Asn Pro Glu Ser Ala

115	120	125
Leu Asn Glu Glu Ala Gly Arg Leu Leu Leu Glu Asn Tyr Glu Glu Tyr		
130	135	140
Ala Ala Arg Ala Arg Leu Leu Thr Glu Ile His Gly Gly Ala Gly Gly		
145	150	155
Pro Ser Gly Arg Ala Glu Ala Gly Arg Ala Leu Ala Ser Gly Thr Glu		
	165	170
Ala Ser Ser Thr Asp Pro Gly Ala Pro Gly Gly Pro Gly Gly Ala Glu		
	180	185
Gly Thr Met Ala Lys Lys His Ala Gly Glu Arg Asp Lys Lys Leu Ala		
	195	200
Ala Lys Lys Lys Thr Asp Lys Lys Arg Ala Leu Arg Arg Leu		
	210	220

<210> 238
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 238
Met Ala Val Arg Ala Ser Phe Glu Asn Asn Cys Glu Ile Gly Cys Phe
1 5 10 15
Ala Lys Leu Thr Asn Thr Tyr Cys Leu Val Ala Ile Gly Gly Ser Glu
20 25 30
Asn Phe Tyr Ser Val Phe Glu Gly Glu Leu Ser Asp Thr Ile Pro Val
35 40 45
Val His Ala Ser Ile Ala Gly Cys Arg Ile Ile Gly Arg Met Cys Val
50 55 60
Gly Asn Arg His Gly Leu Leu Val Pro Asn Asn Thr Thr Asp Gln Glu
65 70 75 80
Leu Gln His Ile Arg Asn Ser Leu Pro Asp Thr Val Gln Ile Arg Arg
85 90 95
Val Glu Glu Arg Leu Ser Ala Leu Gly Asn Val Thr Thr Cys Asn Asp
100 105 110

95/217

Tyr Val Ala Leu Val His Pro Asp Leu Asp Arg Glu Thr Glu Glu Ile
115 120 125

Leu Ala Asp Val Leu Lys Val Glu Val Phe Arg Gln Thr Val Ala Asp
130 135 140

Gln Val Leu Val Gly Ser Tyr Cys Val Phe Ser Asn Gln Gly Gly Leu
145 150 155 160

Val His Pro Lys Thr Ser Ile Glu Asp Gln Asp Glu Leu Ser Ser Leu
165 170 175

Leu Gln Val Pro Leu Val Ala Gly Thr Val Asn Arg Gly Ser Glu Val
180 185 190

Ile Ala Ala Gly Met Val Val Asn Asp Trp Cys Ala Phe Cys Gly Leu
195 200 205

Asp Thr Thr Ser Thr Glu Leu Ser Val Val Glu Ser Val Phe Lys Leu
210 215 220

Asn Glu Ala Gln Pro Ser Thr Ile Ala Thr Ser Met Arg Asp Ser Leu
225 230 235 240

Ile Asp Ser Leu Thr
245

<210> 239
<211> 117
<212> PRT
<213> Homo sapiens

<400> 239
Met Glu Ser Gly Ala Lys Gly Cys Glu Val Val Val Ser Gly Lys Leu
1 5 10 15

Arg Gly Gln Arg Ala Lys Ser Met Lys Phe Val Asp Gly Leu Met Ile
20 25 30

His Ser Gly Asp Pro Val Asn Tyr Tyr Val Asp Thr Ala Val Arg His
35 40 45

Val Leu Leu Arg Gln Gly Val Leu Gly Ile Lys Val Lys Ile Met Leu
50 55 60

Pro Trp Asp Pro Thr Gly Lys Ile Gly Pro Lys Lys Pro Leu Pro Asp
65 70 75 80

His Val Ser Ile Val Glu Pro Lys Asp Glu Ile Leu Pro Thr Thr Pro
 85 90 95

Ile Ser Glu Gln Lys Gly Gly Lys Pro Glu Pro Pro Ala Met Pro Gln
 100 105 110

Pro Val Pro Thr Ala
 115

<210> 240

<211> 444

<212> PRT

<213> Homo sapiens

<400> 240

Met Arg Glu Ile Val His Ile Gln Ala Gly Gln Cys Gly Asn Gln Ile
 1 5 10 15

Gly Ala Lys Phe Trp Glu Val Ile Ser Asp Glu His Gly Ile Asp Pro
 20 25 30

Thr Gly Thr Tyr His Gly Asp Ser Asp Leu Gln Leu Asp Arg Ile Ser
 35 40 45

Val Tyr Tyr Asn Glu Ala Thr Gly Gly Lys Tyr Val Pro Arg Ala Ile
 50 55 60

Leu Val Asp Leu Glu Pro Gly Thr Met Asp Ser Val Arg Ser Gly Pro
 65 70 75 80

Phe Gly Gln Ile Phe Arg Pro Asp Asn Phe Val Phe Gly Gln Ser Gly
 85 90 95

Ala Gly Asn Asn Trp Ala Lys Gly His Tyr Thr Glu Gly Ala Glu Leu
 100 105 110

Val Asp Ser Val Leu Asp Val Val Arg Lys Glu Ala Glu Ser Cys Asp
 115 120 125

Cys Leu Gln Gly Phe Gln Leu Thr His Ser Leu Gly Gly Gly Thr Gly
 130 135 140

Ser Gly Met Gly Thr Leu Leu Ile Ser Lys Ile Arg Glu Glu Tyr Pro
 145 150 155 160

Asp Arg Ile Met Asn Thr Phe Ser Val Val Pro Ser Pro Lys Val Ser

165	170	175
Asp Thr Val Val Glu Pro Tyr Asn Ala Thr Leu Ser Val His Gln Leu		
180	185	190
Val Glu Asn Thr Asp Glu Thr Tyr Cys Ile Asp Asn Glu Ala Leu Tyr		
195	200	205
Asp Ile Cys Phe Arg Thr Leu Lys Leu Thr Thr Pro Thr Tyr Gly Asp		
210	215	220
Leu Asn His Leu Val Ser Ala Thr Met Ser Gly Val Thr Thr Cys Leu		
225	230	235
Arg Phe Pro Gly Gln Leu Asn Ala Asp Leu Arg Lys Leu Ala Val Asn		
245	250	255
Met Val Pro Phe Pro Arg Leu His Phe Phe Met Pro Gly Phe Ala Pro		
260	265	270
Leu Thr Ser Arg Gly Ser Gln Gln Tyr Arg Ala Leu Thr Val Pro Glu		
275	280	285
Leu Thr Gln Gln Val Phe Asp Ala Lys Asn Met Met Ala Ala Cys Asp		
290	295	300
Pro Arg His Gly Arg Tyr Leu Thr Val Ala Ala Val Phe Arg Gly Arg		
305	310	315
Met Ser Met Lys Glu Val Asp Glu Gln Met Leu Asn Val Gln Asn Lys		
325	330	335
Asn Ser Ser Tyr Phe Val Glu Trp Ile Pro Asn Asn Val Lys Thr Ala		
340	345	350
Val Cys Asp Ile Pro Pro Arg Gly Leu Lys Met Ala Val Thr Phe Ile		
355	360	365
Gly Asn Ser Thr Ala Ile Gln Glu Leu Phe Lys Arg Ile Ser Glu Gln		
370	375	380
Phe Thr Ala Met Phe Arg Arg Lys Ala Phe Leu His Trp Tyr Thr Gly		
385	390	395
Glu Gly Met Asp Glu Met Glu Phe Thr Glu Ala Glu Ser Asn Met Asn		
405	410	415
Asp Leu Val Ser Glu Tyr Gln Gln Tyr Gln Asp Ala Thr Ala Glu Glu		

420	425	430
Glu Glu Asp Phe Gly Glu Glu Ala Glu Glu Glu Ala		
435	440	

<210> 241
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 241

Met Asp Glu Gln Ile Arg Leu Met Asp Gln Asn Leu Lys Cys Leu Ser
1 5 10 15

Ala Ala Glu Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu
20 25 30

Ile Lys Ile Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
35 40 45

Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu
50 55 60

Glu Asp Lys Leu Lys Cys Thr Lys Glu Glu His Leu Cys Thr Gln Arg
65 70 75 80

Met Leu Asp Gln Thr Leu Leu Asp Leu Asn Glu Met
85 90

<210> 242
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 242

Met Val Met Gly Ile Thr Asp Val Asp Asp Lys Ile Ile Lys Arg Ala
1 5 10 15

Asn Glu Met Asn Ile Ser Pro Ala Ser Leu Ala Ser Leu Tyr Glu Glu
20 25 30

Asp Phe Lys Gln Asp Met Ala Ala Leu Lys Val Leu Pro Pro Thr Val
35 40 45

Tyr Leu Arg Val Thr Glu Asn Ile Pro Gln Ile Ile Ser Phe Ile Glu
50 55 60

Gly	Ile	Ile	Ala	Ser	Trp	Glu	Arg	Leu	Phe	Asn	Gly	Lys	Arg	Gln	Cys	65	70	75	80
Leu	Leu	Arg	Ser	Glu	Ser	Leu	Glu	Glu	Thr	Lys	Tyr	Gly	Lys	Ile	Gly	85	90	95	
Arg	Arg	Gly	Pro	Trp	Ser	Ser	Pro	Glu	Thr	Ser	Gly	Leu	Leu	Thr	Ser	100	105	110	
Arg	His	Ala	Asn	Asp	Phe	Ala	Leu	Trp	Lys	Ala	Ala	Lys	Pro	Gln	Glu	115	120	125	
Val	Phe	Trp	Ala	Ser	Pro	Trp	Gly	Pro	Gly	Arg	Pro	Gly	Trp	His	Ile	130	135	140	
Glu	Cys	Ser	Ala	Ile	Ala	Ser	Met	Val	Phe	Gly	Ser	Gln	Leu	Asp	Ile	145	150	155	160
His	Ser	Gly	Gly	Ile	Asp	Leu	Ala	Phe	Pro	His	His	Glu	Asn	Glu	Ile	165	170	175	
Ala	Gln	Cys	Glu	Val	Phe	His	Gln	Cys	Glu	Gln	Trp	Gly	Asn	Tyr	Phe	180	185	190	
Leu	His	Ser	Gly	His	Leu	His	Ala	Lys	Gly	Lys	Glu	Glu	Lys	Met	Ser	195	200	205	
Lys	Ser	Leu	Lys	Asn	Tyr	Ile	Thr	Ile	Lys	Asp	Phe	Leu	Lys	Thr	Phe	210	215	220	
Ser	Pro	Asp	Val	Phe	Arg	Phe	Phe	Cys	Leu	Arg	Ser	Ser	Tyr	Arg	Ser	225	230	235	240
Ala	Ile	Asp	Tyr	Ser	Asp	Ser	Ala	Met	Leu	Gln	Ala	Gln	Gln	Leu	Leu	245	250	255	
Leu	Gly	Leu	Gly	Ser	Phe	Leu	Glu	Asp	Ala	Arg	Ala	Tyr	Met	Lys	Gly	260	265	270	
Gln	Leu	Ala	Cys	Gly	Ser	Val	Arg	Glu	Ala	Met	Leu	Trp	Glu	Arg	Leu	275	280	285	
Ser	Ser	Thr	Lys	Arg	Ala	Val	Lys	Ala	Ala	Leu	Ala	Asp	Asp	Phe	Asp	290	295	300	
Thr	Pro	Arg	Val	Val	Asp	Ala	Ile	Leu	Gly	Leu	Ala	His	His	Gly	Asn	305	310	315	320

Gly Gln Leu Arg Ala Ser Leu Lys Glu Pro Glu Gly Pro Arg Ser Pro
325 330 335

Ala Val Phe Gly Ala Ile Ile Ser Tyr Phe Glu Gln Phe Phe Glu Thr
340 345 350

Val Gly Ile Ser Leu Ala Asn Gln Gln Tyr Val Ser Gly Asp Gly Ser
355 360 365

Glu Ala Thr Leu His Gly Val Val Asp Glu Leu Val Arg Phe Arg Gln
370 375 380

Lys Val Arg Gln Phe Ala Leu Ala Met Pro Glu Ala Thr Gly Asp Ala
385 390 395 400

Arg Arg Gln Gln Leu Leu Glu Arg Gln Pro Leu Leu Glu Ala Cys Asp
405 410 415

Thr Leu Arg Arg Gly Leu Thr Ala His Gly Ile Asn Ile Lys Asp Arg
420 425 430

Ser Ser Thr Thr Ser Thr Trp Glu Leu Leu Asp Gln Arg Thr Lys Asp
435 440 445

Gln Lys Ser Ala Gly
450

<210> 243

<211> 209

<212> PRT

<213> Homo sapiens

<400> 243

Met Lys Glu Leu Ala Glu Glu Glu Pro His Leu Val Glu Gln Phe Gln
1 5 10 15

Lys Leu Ser Glu Ala Ala Gly Arg Val Gly Ser Asp Met Thr Ser Gln
20 25 30

Gln Glu Phe Thr Ser Cys Leu Lys Glu Thr Leu Ser Gly Leu Ala Lys
35 40 45

Asn Ala Thr Asp Leu Gln Asn Ser Ser Met Ser Glu Glu Glu Leu Thr
50 55 60

Lys Ala Met Glu Gly Leu Gly Met Asp Glu Gly Asp Gly Glu Gly Asn

65		70		75		80									
Ile	Leu	Pro	Ile	Met	Gln	Ser	Ile	Met	Gln	Asn	Leu	Leu	Ser	Lys	Asp
				85					90					95	
Val	Leu	Tyr	Pro	Ser	Leu	Lys	Glu	Ile	Thr	Glu	Lys	Tyr	Pro	Glu	Trp
			100					105					110		
Leu	Gln	Ser	His	Arg	Glu	Ser	Leu	Pro	Pro	Glu	Gln	Phe	Glu	Lys	Tyr
		115					120					125			
Gln	Glu	Gln	His	Ser	Val	Met	Cys	Lys	Ile	Cys	Glu	Gln	Phe	Glu	Ala
	130					135					140				
Glu	Thr	Pro	Thr	Asp	Ser	Glu	Thr	Thr	Gln	Lys	Ala	Arg	Phe	Glu	Met
145					150					155					160
Val	Leu	Asp	Leu	Met	Gln	Gln	Leu	Gln	Asp	Leu	Gly	His	Pro	Pro	Lys
				165					170						175
Glu	Leu	Ala	Gly	Glu	Met	Pro	Pro	Gly	Leu	Asn	Phe	Asp	Leu	Asp	Ala
		180						185					190		
Leu	Asn	Leu	Ser	Gly	Pro	Pro	Gly	Ala	Ser	Gly	Glu	Gln	Cys	Leu	Ile
		195					200					205			

Met

<210> 244

<211> 354

<212> PRT

<213> Homo sapiens

<400> 244

Met	Arg	Arg	Leu	Met	Ser	Ser	Arg	Asp	Trp	Pro	Arg	Thr	Arg	Thr	Gly
1				5					10					15	
Thr	Gly	Ile	Leu	Ser	Ser	Gln	Pro	Glu	Glu	Asn	Pro	Tyr	Trp	Trp	Asn
			20					25					30		
Ala	Asn	Met	Val	Phe	Ile	Pro	Tyr	Cys	Ser	Ser	Asp	Val	Trp	Ser	Gly
		35					40					45			
Ala	Ser	Ser	Lys	Ser	Glu	Lys	Asn	Glu	Tyr	Ala	Phe	Met	Gly	Ala	Leu
		50				55						60			

Ile	Ile	Gln	Glu	Val	Val	Arg	Glu	Leu	Leu	Gly	Arg	Gly	Leu	Ser	Gly	65	70	75	80
Ala	Lys	Val	Leu	Leu	Leu	Ala	Gly	Ser	Ser	Ala	Gly	Gly	Thr	Gly	Val	85	90	95	
Leu	Leu	Asn	Val	Asp	Arg	Val	Ala	Glu	Gln	Leu	Glu	Lys	Leu	Gly	Tyr	100	105	110	
Pro	Ala	Ile	Gln	Val	Arg	Gly	Leu	Ala	Asp	Ser	Gly	Trp	Phe	Leu	Asp	115	120	125	
Asn	Lys	Gln	Tyr	Arg	His	Thr	Asp	Cys	Val	Asp	Thr	Ile	Thr	Cys	Ala	130	135	140	
Pro	Thr	Glu	Ala	Ile	Arg	Arg	Gly	Ile	Arg	Tyr	Trp	Asn	Gly	Val	Val	145	150	155	160
Pro	Glu	Arg	Cys	Arg	Arg	Gln	Phe	Gln	Glu	Gly	Glu	Glu	Trp	Asn	Cys	165	170	175	
Phe	Phe	Gly	Tyr	Lys	Val	Tyr	Pro	Thr	Leu	Arg	Cys	Pro	Val	Phe	Val	180	185	190	
Val	Gln	Trp	Leu	Phe	Asp	Glu	Ala	Gln	Leu	Thr	Val	Asp	Asn	Val	His	195	200	205	
Leu	Thr	Gly	Gln	Pro	Val	Gln	Glu	Gly	Leu	Arg	Leu	Tyr	Ile	Gln	Asn	210	215	220	
Leu	Gly	Arg	Glu	Leu	Arg	His	Thr	Leu	Lys	Asp	Val	Pro	Ala	Ser	Phe	225	230	235	240
Ala	Pro	Ala	Cys	Leu	Ser	His	Glu	Ile	Ile	Ile	Arg	Ser	His	Trp	Thr	245	250	255	
Asp	Val	Gln	Val	Lys	Gly	Thr	Ser	Leu	Pro	Arg	Ala	Leu	His	Cys	Trp	260	265	270	
Asp	Arg	Ser	Leu	His	Asp	Ser	His	Lys	Ala	Ser	Lys	Thr	Pro	Leu	Lys	275	280	285	
Gly	Cys	Pro	Val	His	Leu	Val	Asp	Ser	Cys	Pro	Trp	Pro	His	Cys	Asn	290	295	300	
Pro	Ser	Cys	Pro	Thr	Val	Arg	Asp	Gln	Phe	Thr	Gly	Gln	Glu	Met	Asn	305	310	315	320

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Val Ala Gln Phe Leu Met His Met Gly Phe Asp Met Gln Thr Val Ala
325 330 335

Gln Pro Gln Gly Leu Glu Pro Ser Glu Leu Leu Gly Met Leu Ser Asn
340 345 350

Gly Ser

<210> 245

<211> 295

<212> PRT

<213> Homo sapiens

<400> 245

Met Glu Leu Ile Gln Asp Thr Ser Arg Pro Pro Leu Glu Tyr Val Lys
1 5 10 15

Gly Val Pro Leu Ile Lys Tyr Phe Ala Glu Ala Leu Gly Pro Leu Gln
20 25 30

Ser Phe Gln Ala Arg Pro Asp Asp Leu Leu Ile Ser Thr Tyr Pro Lys
35 40 45

Ser Gly Thr Thr Trp Val Ser Gln Ile Leu Asp Met Ile Tyr Gln Gly
50 55 60

Gly Asp Leu Glu Lys Cys His Arg Ala Pro Ile Phe Met Arg Val Pro
65 70 75 80

Phe Leu Glu Phe Lys Ala Pro Gly Ile Pro Ser Gly Met Glu Thr Leu
85 90 95

Lys Asp Thr Pro Ala Pro Arg Leu Leu Lys Thr His Leu Pro Leu Ala
100 105 110

Leu Leu Pro Gln Thr Leu Leu Asp Gln Lys Val Lys Val Val Tyr Val
115 120 125

Ala Arg Asn Ala Lys Asp Val Ala Val Ser Tyr Tyr His Phe Tyr His
130 135 140

Met Ala Lys Val His Pro Glu Pro Gly Thr Trp Asp Ser Phe Leu Glu
145 150 155 160

Lys Phe Met Val Gly Glu Val Ser Tyr Gly Ser Trp Tyr Gln His Val
165 170 175

Gln Glu Trp Trp Glu Leu Ser Arg Thr His Pro Val Leu Tyr Leu Phe
 180 185 190

Tyr Glu Asp Met Lys Glu Asn Pro Lys Arg Glu Ile Gln Lys Ile Leu
 195 200 205

Glu Phe Val Gly His Ser Leu Pro Glu Glu Thr Val Asp Phe Met Val
 210 215 220

Gln His Thr Ser Phe Lys Glu Met Lys Lys Asn Pro Met Thr Asn Tyr
 225 230 235 240

Thr Thr Val Pro Gln Glu Phe Met Asp His Ser Ile Ser Pro Phe Met
 245 250 255

Arg Lys Gly Met Ala Gly Asp Trp Lys Thr Thr Phe Thr Val Ala Gln
 260 265 270

Asn Glu Arg Phe Asp Ala Asp Tyr Ala Glu Lys Met Ala Gly Cys Ser
 275 280 285

Leu Ser Phe Arg Ser Glu Leu
 290 295

<210> 246

<211> 439

<212> PRT

<213> Homo sapiens

<400> 246

Met Glu Pro Ser Thr Ala Ala Arg Ala Trp Ala Leu Phe Trp Leu Leu
 1 5 10 15

Leu Pro Leu Leu Gly Ala Val Cys Ala Ser Gly Pro Arg Thr Leu Val
 20 25 30

Leu Leu Asp Asn Leu Asn Val Arg Glu Thr His Ser Leu Phe Phe Arg
 35 40 45

Ser Leu Lys Asp Arg Gly Phe Glu Leu Thr Phe Lys Thr Ala Asp Asp
 50 55 60

Pro Ser Leu Ser Leu Ile Lys Tyr Gly Glu Phe Leu Tyr Asp Asn Leu
 65 70 75 80

Ile Ile Phe Ser Pro Ser Val Glu Asp Phe Gly Gly Asn Ile Asn Val

	85		90		95
Glu Thr Ile Ser Ala Phe Ile Asp Gly Gly Gly Ser Val Leu Val Ala					
	100		105		110
Ala Ser Ser Asp Ile Gly Asp Pro Leu Arg Glu Leu Gly Ser Glu Cys					
	115		120		125
Gly Ile Glu Phe Asp Glu Glu Lys Thr Ala Val Ile Asp His His Asn					
	130		135		140
Tyr Asp Ile Ser Asp Leu Gly Gln His Thr Leu Ile Val Ala Asp Thr					
	145		150		155
					160
Glu Asn Leu Leu Lys Ala Pro Thr Ile Val Gly Lys Ser Ser Leu Asn					
	165		170		175
Pro Ile Leu Phe Arg Gly Val Gly Met Val Ala Asp Pro Asp Asn Pro					
	180		185		190
Leu Val Leu Asp Ile Leu Thr Gly Ser Ser Thr Ser Tyr Ser Phe Phe					
	195		200		205
Pro Asp Lys Pro Ile Thr Gln Tyr Pro His Ala Val Gly Lys Asn Thr					
	210		215		220
Leu Leu Ile Ala Gly Leu Gln Ala Arg Asn Asn Ala Arg Val Ile Phe					
	225		230		235
					240
Ser Gly Ser Leu Asp Phe Phe Ser Asp Ser Phe Phe Asn Ser Ala Val					
	245		250		255
Gln Lys Ala Ala Pro Gly Ser Gln Arg Tyr Ser Gln Thr Gly Asn Tyr					
	260		265		270
Glu Leu Ala Val Ala Leu Ser Arg Trp Val Phe Lys Glu Glu Gly Val					
	275		280		285
Leu Arg Val Gly Pro Val Ser His His Arg Val Gly Glu Thr Ala Pro					
	290		295		300
Pro Asn Ala Tyr Thr Val Thr Asp Leu Val Glu Tyr Ser Ile Val Ile					
	305		310		315
					320
Gln Gln Leu Ser Asn Gly Lys Trp Val Pro Phe Asp Gly Asp Asp Ile					
	325		330		335
Gln Leu Glu Phe Val Arg Ile Asp Pro Phe Val Arg Thr Phe Leu Lys					

340	345	350
Lys Lys Gly Gly Lys Tyr Ser Val Gln Phe Lys Leu Pro Asp Val Tyr		
355	360	365
Gly Val Phe Gln Phe Lys Val Asp Tyr Asn Arg Leu Gly Tyr Thr His		
370	375	380
Leu Tyr Ser Ser Thr Gln Val Ser Val Arg Pro Leu Gln His Thr Gln		
385	390	395
Tyr Glu Arg Phe Ile Pro Ser Ala Tyr Pro Tyr Tyr Ala Ser Ala Phe		
405	410	415
Ser Met Met Leu Gly Leu Phe Ile Phe Ser Ile Val Phe Leu His Met		
420	425	430
Lys Glu Lys Glu Lys Ser Asp		
435		

<210> 247
 <211> 56
 <212> PRT
 <213> Homo sapiens

<400> 247
Met Glu Thr Leu His Thr Trp Gly Ser Lys Val Leu Gly Tyr Ser Trp
1 5 10 15
Ile Phe Arg Thr Ser Ala Tyr Pro Gln Val Ser Gln Ala Ser Gly Gly
20 25 30
Glu Ala Ser Asp Pro Trp Pro Thr Cys Tyr Pro Pro Gln Gly Leu Asp
35 40 45
Leu Ser Ser Arg Glu Gly Thr Glu
50 55

<210> 248
 <211> 46
 <212> PRT
 <213> Homo sapiens

<400> 248
Met Gly Phe Lys Gly Pro Gly Val Phe Leu Asp Leu Gln Asp Ile Cys
1 5 10 15

107/217

Leu Pro Ser Gly Phe Pro Gly Leu Gly Trp Gly Gly Ile Arg Ser Leu
20 25 30

Ala Asn Leu Leu Ser Thr Pro Gly Phe Arg Pro Leu Phe Pro
35 40 45

<210> 249

<211> 61

<212> PRT

<213> Homo sapiens

<400> 249

Ile Gly Thr Val Phe Leu Glu Gly Asn Leu Val Lys Cys Ile Lys Arg
1 5 10 15

Leu Lys Asn Thr Asp Val Leu Cys Ala Gly Asn Ser Thr Ser Ser Asn
20 25 30

Phe Ser Leu Lys Pro Tyr Gln Arg Cys Ile Gln Arg Ile Ile Tyr Lys
35 40 45

Glu Gly Cys Leu Ile Met Ile Val Ile Ile Ile Asn Asn
50 55 60

<210> 250

<211> 73

<212> PRT

<213> Homo sapiens

<400> 250

Met Phe Asp Ser Pro Phe Tyr Glu Leu Asn Tyr Phe Ile Arg Val Gly
1 5 10 15

Asn Phe Cys Phe Leu Ile Lys Trp Lys Leu Ala Phe Leu Thr Leu Phe
20 25 30

Leu Leu Leu Phe Tyr Arg Asn Ala Phe Cys Trp Pro Gly Thr Val Ala
35 40 45

His Pro Cys Asn Pro Ser Thr Val Gly Gly Arg Asp Gly Trp Ile Thr
50 55 60

Arg Ser Gly Asp Arg Asp His Pro Gly
65 70

<210> 251
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 251
 Met Leu Phe Val Gly Arg Ala Gln Leu Leu Ile His Val Ile Pro Ala
 1 5 10 15
 Leu Trp Glu Ala Glu Thr Gly Gly Ser Gln Gly Gln Glu Ile Glu Thr
 20 25 30
 Ile Leu Ala Asn Ala Leu Lys Leu Arg Leu Cys
 35 40

<210> 252
 <211> 30
 <212> PRT
 <213> Homo sapiens

<400> 252
 Met Tyr Ile Phe Phe Cys Val Leu Phe Leu Leu Leu Leu Leu Phe Glu
 1 5 10 15
 Thr Gly Ser Cys Ser Val Ala Gln Ala Gly Val Gln Trp His
 20 25 30

<210> 253
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 253
 Met Asn Cys Asn Thr Gln Ser Gln Thr Arg Ala Leu Pro Arg Pro Leu
 1 5 10 15
 Gly Gly Cys Thr Pro Ser Ser Ser Ala Arg Leu Arg Ser Leu Arg Pro
 20 25 30
 Arg Leu Lys Glu Gly Val Ala Gly Asn Pro Gly Asn Leu Ser Glu Val
 35 40 45
 Thr Pro His Pro Tyr Thr Pro Ser Val His Pro Arg Leu Phe Leu Leu
 50 55 60

Leu Phe Gly Phe Trp Lys Gly Ile His Leu Gln Ala Ala His Pro Gly
 65 70 75 80

Gly Ala Cys Phe Leu Lys Pro
 85

<210> 254

<211> 211

<212> PRT

<213> Homo sapiens

<400> 254

Met Ala Pro Ser Arg Asn Gly Met Val Leu Lys Pro His Phe His Lys
 1 5 10 15

Asp Trp Gln Arg Arg Val Ala Thr Trp Phe Asn Gln Pro Ala Arg Lys
 20 25 30

Ile Arg Arg Arg Lys Ala Arg Gln Ala Lys Ala Arg Arg Ile Ala Pro
 35 40 45

Arg Pro Ala Ser Gly Pro Ile Arg Pro Ile Val Arg Cys Pro Thr Val
 50 55 60

Arg Tyr His Thr Lys Val Arg Ala Gly Arg Gly Phe Ser Leu Glu Glu
 65 70 75 80

Leu Arg Val Ala Gly Ile His Lys Lys Val Ala Arg Thr Ile Gly Ile
 85 90 95

Ser Val Asp Pro Arg Arg Arg Asn Lys Ser Thr Glu Ser Leu Gln Ala
 100 105 110

Asn Val Gln Arg Leu Lys Glu Tyr Arg Ser Lys Leu Ile Leu Phe Pro
 115 120 125

Arg Lys Pro Ser Ala Pro Lys Lys Gly Asp Ser Ser Ala Glu Glu Leu
 130 135 140

Lys Leu Ala Thr Gln Leu Thr Gly Pro Val Met Pro Val Arg Asn Val
 145 150 155 160

Tyr Lys Lys Glu Lys Ala Arg Val Ile Thr Glu Glu Glu Lys Asn Phe
 165 170 175

Lys Ala Phe Ala Ser Leu Arg Met Ala Arg Ala Asn Ala Arg Leu Phe
 180 185 190

Gly Ile Arg Ala Lys Arg Ala Lys Glu Ala Ala Glu Gln Asp Val Glu
 195 200 205

Lys Lys Lys
 210

<210> 255

<211> 417

<212> PRT

<213> Homo sapiens

<400> 255

Met Ser Leu Ser Asn Lys Leu Thr Leu Asp Lys Leu Asp Val Lys Gly
 1 5 10 15

Lys Arg Val Val Met Arg Val Asp Phe Asn Val Pro Met Lys Asn Asn
 20 25 30

Gln Ile Thr Asn Asn Gln Arg Ile Lys Ala Ala Val Pro Ser Ile Lys
 35 40 45

Phe Cys Leu Asp Asn Gly Ala Lys Ser Val Val Leu Met Ser His Leu
 50 55 60

Gly Arg Pro Asp Gly Val Pro Met Pro Asp Lys Tyr Ser Leu Glu Pro
 65 70 75 80

Val Ala Val Glu Leu Lys Ser Leu Leu Gly Lys Asp Val Leu Phe Leu
 85 90 95

Lys Asp Cys Val Gly Pro Glu Val Glu Lys Ala Cys Ala Asn Pro Ala
 100 105 110

Ala Gly Ser Val Ile Leu Leu Glu Asn Leu Arg Phe His Val Glu Glu
 115 120 125

Glu Gly Lys Gly Lys Asp Ala Ser Gly Asn Lys Val Lys Ala Glu Pro
 130 135 140

Ala Lys Ile Glu Ala Phe Arg Ala Ser Leu Ser Lys Leu Gly Asp Val
 145 150 155 160

Tyr Val Asn Asp Ala Phe Gly Thr Ala His Arg Ala His Ser Ser Met
 165 170 175

Val Gly Val Asn Leu Pro Gln Lys Ala Gly Gly Phe Leu Met Lys Lys

180	185	190
Glu Leu Asn Tyr Phe Ala Lys	Ala Leu Glu Ser Pro	Glu Arg Pro Phe
195	200	205
Leu Ala Ile Leu Gly Gly Ala Lys Val	Ala Asp Lys	Ile Gln Leu Ile
210	215	220
Asn Asn Met Leu Asp Lys Val Asn Glu Met	Ile Ile Gly Gly Gly Met	
225	230	235 240
Ala Phe Thr Phe Leu Lys Val Leu Asn Asn Met	Glu Ile Gly Thr Ser	
245	250	255
Leu Phe Asp Glu Glu Gly Ala Lys Ile Val Lys Asp	Leu Met Ser Lys	
260	265	270
Ala Glu Lys Asn Gly Val Lys Ile Thr Leu Pro Val	Asp Phe Val Thr	
275	280	285
Ala Asp Lys Phe Asp Glu Asn Ala Lys Thr Gly Gln	Ala Thr Val Ala	
290	295	300
Ser Gly Ile Pro Ala Gly Trp Met Gly Leu Asp Cys Gly Pro Glu Ser		
305	310	315 320
Ser Lys Lys Tyr Ala Glu Ala Val Thr Arg Ala Lys Gln Ile Val Trp		
325	330	335
Asn Gly Pro Val Gly Val Phe Glu Trp Glu Ala Phe Ala Arg Gly Thr		
340	345	350
Lys Ala Leu Met Asp Glu Val Val Lys Ala Thr Ser Arg Gly Cys Ile		
355	360	365
Thr Ile Ile Gly Gly Gly Asp Thr Ala Thr Cys Cys Ala Lys Trp Asn		
370	375	380
Thr Glu Asp Lys Val Ser His Val Ser Thr Gly Gly Gly Ala Ser Leu		
385	390	395 400
Glu Leu Leu Glu Gly Lys Val Leu Pro Gly Val Asp Ala Leu Ser Asn		
405	410	415
Ile		

<210> 256
 <211> 568
 <212> PRT
 <213> Homo sapiens

<400> 256

Met Val Leu Gly Pro Glu Gln Lys Met Ser Asp Asp Ser Val Ser Gly
 1 5 10 15

Asp His Gly Glu Ser Ala Ser Leu Gly Asn Ile Asn Pro Ala Tyr Ser
 20 25 30

Asn Pro Ser Leu Ser Gln Ser Pro Gly Asp Ser Glu Glu Tyr Phe Ala
 35 40 45

Thr Tyr Phe Asn Glu Lys Ile Ser Ile Pro Glu Glu Glu Tyr Ser Cys
 50 55 60

Phe Ser Phe Arg Lys Leu Trp Ala Phe Thr Gly Pro Gly Phe Leu Met
 65 70 75 80

Ser Ile Ala Tyr Leu Asp Pro Gly Asn Ile Glu Ser Asp Leu Gln Ser
 85 90 95

Gly Ala Val Ala Gly Phe Lys Leu Leu Trp Ile Leu Leu Leu Ala Thr
 100 105 110

Leu Val Gly Leu Leu Leu Gln Arg Leu Ala Ala Arg Leu Gly Val Val
 115 120 125

Thr Gly Leu His Leu Ala Glu Val Cys His Arg Gln Tyr Pro Lys Val
 130 135 140

Pro Arg Val Ile Leu Trp Leu Met Val Glu Leu Ala Ile Ile Gly Ser
 145 150 155 160

Asp Met Gln Glu Val Ile Gly Ser Ala Ile Ala Ile Asn Leu Leu Ser
 165 170 175

Val Gly Arg Ile Pro Leu Trp Gly Gly Val Leu Ile Thr Ile Ala Asp
 180 185 190

Thr Phe Val Phe Leu Phe Leu Asp Lys Tyr Gly Leu Arg Lys Leu Glu
 195 200 205

Ala Phe Phe Gly Phe Leu Ile Thr Ile Met Ala Leu Thr Phe Gly Tyr
 210 215 220

Glu Tyr Val Thr Val Lys Pro Ser Gln Ser Gln Val Leu Lys Gly Met
 225 230 235 240

Phe Val Pro Ser Cys Ser Gly Cys Arg Thr Pro Gln Ile Glu Gln Ala
 245 250 255

Val Gly Ile Val Gly Ala Val Ile Met Pro His Asn Met Tyr Leu His
 260 265 270

Ser Ala Leu Val Lys Ser Arg Gln Val Asn Arg Asn Asn Lys Gln Glu
 275 280 285

Val Arg Glu Ala Asn Lys Tyr Phe Phe Ile Glu Ser Cys Ile Ala Leu
 290 295 300

Phe Val Ser Phe Ile Ile Asn Val Phe Val Val Ser Val Phe Ala Glu
 305 310 315 320

Ala Phe Phe Gly Lys Thr Asn Glu Gln Val Val Glu Val Cys Thr Asn
 325 330 335

Thr Ser Ser Pro His Ala Gly Leu Phe Pro Lys Asp Asn Ser Thr Leu
 340 345 350

Ala Val Asp Ile Tyr Lys Gly Gly Val Val Leu Gly Cys Tyr Phe Gly
 355 360 365

Pro Ala Ala Leu Tyr Ile Trp Ala Val Gly Ile Leu Ala Ala Gly Gln
 370 375 380

Ser Ser Thr Met Thr Gly Thr Tyr Ser Gly Gln Phe Val Met Glu Gly
 385 390 395 400

Phe Leu Asn Leu Lys Trp Ser Arg Phe Ala Arg Val Val Leu Thr Arg
 405 410 415

Ser Ile Ala Ile Ile Pro Thr Leu Leu Val Ala Val Phe Gln Asp Val
 420 425 430

Glu His Leu Thr Gly Met Asn Asp Phe Leu Asn Val Leu Gln Ser Leu
 435 440 445

Gln Leu Pro Phe Ala Leu Ile Pro Ile Leu Thr Phe Thr Ser Leu Arg
 450 455 460

Pro Val Met Ser Asp Phe Ala Asn Gly Leu Gly Trp Arg Ile Ala Gly
 465 470 475 480

Gly Ile Leu Val Leu Ile Ile Cys Ser Ile Asn Met Tyr Phe Val Val
 485 490 495

Val Tyr Val Arg Asp Leu Gly His Val Ala Leu Tyr Val Val Ala Ala
 500 505 510

Val Val Ser Val Ala Tyr Leu Gly Phe Val Phe Tyr Leu Gly Trp Gln
 515 520 525

Cys Leu Ile Ala Leu Gly Met Ser Phe Leu Asp Cys Gly His Thr Cys
 530 535 540

His Leu Gly Leu Thr Ala Gln Pro Glu Leu Tyr Leu Leu Asn Thr Met
 545 550 555 560

Asp Ala Asp Ser Leu Val Ser Arg
 565

<210> 257

<211> 46

<212> PRT

<213> Homo sapiens

<400> 257

Met Leu Phe Ile His Ala Glu Val Ile Gln Phe Pro Pro Ser Tyr Arg
 1 5 10 15

Ser Ile Leu Ile His Pro Thr Leu Glu Met Gln His Leu Cys Gly Arg
 20 25 30

Leu Phe His Lys Pro Pro Arg Leu Leu Arg Leu Gly Arg Tyr
 35 40 45

<210> 258

<211> 36

<212> PRT

<213> Homo sapiens

<400> 258

Met Ala Ser Leu Gln Phe Val Ile Ser Leu Pro Val Cys Ser Leu Lys
 1 5 10 15

Leu Ile Lys Arg Ser Gly Tyr Ile Glu Leu Leu Tyr Arg Cys Glu Gly
 20 25 30

Met Asp Lys Ser

35

<210> 259

<211> 898

<212> PRT

<213> Homo sapiens

<400> 259

Met Ser Val Thr Glu Glu Asp Leu Cys His His Met Lys Val Val Val
 1 5 10 15

Arg Val Arg Pro Glu Asn Thr Lys Glu Lys Ala Ala Gly Phe His Lys
 20 25 30

Val Val His Val Val Asp Lys His Ile Leu Val Phe Asp Pro Lys Gln
 35 40 45

Glu Glu Val Ser Phe Phe His Gly Lys Lys Thr Thr Asn Gln Asn Val
 50 55 60

Ile Lys Lys Gln Asn Lys Asp Leu Lys Phe Val Phe Asp Ala Val Phe
 65 70 75 80

Asp Glu Thr Ser Thr Gln Ser Glu Val Phe Glu His Thr Thr Lys Pro
 85 90 95

Ile Leu Arg Ser Phe Leu Asn Gly Tyr Asn Cys Thr Val Leu Ala Tyr
 100 105 110

Gly Ala Thr Gly Ala Gly Lys Thr His Thr Met Leu Gly Ser Ala Asp
 115 120 125

Glu Pro Gly Val Met Tyr Leu Thr Met Leu His Leu Tyr Lys Cys Met
 130 135 140

Asp Glu Ile Lys Glu Glu Lys Ile Cys Ser Thr Ala Val Ser Tyr Leu
 145 150 155 160

Glu Val Tyr Asn Glu Gln Ile Arg Asp Leu Leu Val Asn Ser Gly Pro
 165 170 175

Leu Ala Val Arg Glu Asp Thr Gln Lys Gly Val Val Val His Gly Leu
 180 185 190

Thr Leu His Gln Pro Lys Ser Ser Glu Glu Ile Leu His Leu Leu Asp
 195 200 205

Asn Gly Asn Lys Asn Arg Thr Gln His Pro Thr Asp Met Asn Ala Thr			
210	215	220	
Ser Ser Arg Ser His Ala Val Phe Gln Ile Tyr Leu Arg Gln Gln Asp			
225	230	235	240
Lys Thr Ala Ser Ile Asn Gln Asn Val Arg Ile Ala Lys Met Ser Leu			
	245	250	255
Ile Asp Leu Ala Gly Ser Glu Arg Ala Ser Thr Ser Gly Ala Lys Gly			
	260	265	270
Thr Arg Phe Val Glu Gly Thr Asn Ile Asn Arg Ser Leu Leu Ala Leu			
	275	280	285
Gly Asn Val Ile Asn Ala Leu Ala Asp Ser Lys Arg Lys Asn Gln His			
290	295	300	
Ile Pro Tyr Arg Asn Ser Lys Leu Thr Arg Leu Leu Lys Asp Ser Leu			
305	310	315	320
Gly Gly Asn Cys Gln Thr Ile Met Ile Ala Ala Val Ser Pro Ser Ser			
	325	330	335
Val Phe Tyr Asp Asp Thr Tyr Asn Thr Leu Lys Tyr Ala Asn Arg Ala			
	340	345	350
Lys Asp Ile Lys Ser Ser Leu Lys Ser Asn Val Leu Asn Val Asn Asn			
	355	360	365
His Ile Thr Gln Tyr Val Lys Ile Cys Asn Glu Gln Lys Ala Glu Ile			
370	375	380	
Leu Leu Leu Lys Glu Lys Leu Lys Ala Tyr Glu Glu Gln Lys Ala Phe			
385	390	395	400
Thr Asn Glu Asn Asp Gln Ala Lys Leu Met Ile Ser Asn Pro Gln Glu			
	405	410	415
Lys Glu Ile Glu Arg Phe Gln Glu Ile Leu Asn Cys Leu Phe Gln Asn			
	420	425	430
Arg Glu Glu Ile Arg Gln Glu Tyr Leu Lys Leu Glu Met Leu Leu Lys			
	435	440	445
Glu Asn Glu Leu Lys Ser Phe Tyr Gln Gln Gln Cys His Lys Gln Ile			
450	455	460	

Glu Met Met Cys Ser Glu Asp Lys Val Glu Lys Ala Thr Gly Lys Arg			
465	470	475	480
Asp His Arg Leu Ala Met Leu Lys Thr Arg Arg Ser Tyr Leu Glu Lys			
	485	490	495
Arg Arg Glu Glu Glu Leu Lys Gln Phe Asp Glu Asn Thr Asn Trp Leu			
	500	505	510
His Arg Val Glu Lys Glu Met Gly Leu Leu Ser Gln Asn Gly His Ile			
	515	520	525
Pro Lys Glu Leu Lys Lys Asp Leu His Cys His His Leu His Leu Gln			
	530	535	540
Asn Lys Asp Leu Lys Ala Gln Ile Arg His Met Met Asp Leu Ala Cys			
545	550	555	560
Leu Gln Glu Gln Gln His Arg Gln Thr Glu Ala Val Leu Asn Ala Leu			
	565	570	575
Leu Pro Thr Leu Arg Lys Gln Tyr Cys Thr Leu Lys Glu Ala Gly Leu			
	580	585	590
Ser Asn Ala Ala Phe Glu Ser Asp Phe Lys Glu Ile Glu His Leu Val			
	595	600	605
Glu Arg Lys Lys Val Val Val Trp Ala Asp Gln Thr Gly Glu Gln Pro			
610	615	620	
Lys Gln Asn Asp Leu Pro Gly Ile Ser Val Leu Met Thr Phe Ser Gln			
625	630	635	640
Leu Gly Pro Val Gln Pro Ile Pro Cys Cys Ser Ser Ser Gly Gly Thr			
	645	650	655
Asn Leu Val Lys Ile Pro Thr Glu Lys Arg Thr Arg Arg Lys Leu Met			
	660	665	670
Pro Ser Pro Leu Lys Gly Gln His Thr Leu Lys Ser Pro Pro Ser Gln			
	675	680	685
Ser Val Gln Leu Asn Asp Ser Leu Ser Lys Glu Leu Gln Pro Ile Val			
690	695	700	
Tyr Thr Pro Glu Asp Cys Arg Lys Ala Phe Gln Asn Pro Ser Thr Val			
705	710	715	720

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Thr Leu Met Lys Pro Ser Ser Phe Thr Thr Ser Phe Gln Ala Ile Ser
725 730 735

Ser Asn Ile Asn Ser Asp Asn Cys Leu Lys Met Leu Cys Glu Val Ala
740 745 750

Ile Pro His Asn Arg Arg Lys Glu Cys Gly Gln Glu Asp Leu Asp Ser
755 760 765

Thr Phe Thr Ile Cys Glu Asp Ile Lys Ser Ser Lys Cys Lys Leu Pro
770 775 780

Glu Gln Glu Ser Leu Pro Asn Asp Asn Lys Asp Ile Leu Gln Arg Leu
785 790 795 800

Asp Pro Ser Ser Phe Ser Thr Lys His Ser Met Pro Val Pro Ser Met
805 810 815

Val Pro Ser Tyr Met Ala Met Thr Thr Ala Ala Lys Arg Lys Arg Lys
820 825 830

Leu Thr Ser Ser Thr Ser Asn Ser Ser Leu Thr Ala Asp Val Asn Ser
835 840 845

Gly Phe Ala Lys Arg Val Arg Gln Asp Asn Ser Ser Glu Lys His Leu
850 855 860

Gln Glu Asn Lys Pro Thr Met Glu His Lys Arg Asn Ile Cys Lys Ile
865 870 875 880

Asn Pro Ser Met Val Arg Lys Phe Gly Arg Asn Ile Ser Lys Gly Asn
885 890 895

Leu Arg

<210> 260

<211> 71

<212> PRT

<213> Homo sapiens

<400> 260

Met Ser Lys Asp Arg Ala Asn Met Gln His Arg Tyr Ile Glu Leu Phe
1 5 10 15

Leu Asn Ser Thr Thr Gly Ala Ser Asn Gly Ala Tyr Ser Ser Gln Val
20 25 30

Met Gln Gly Met Gly Val Ser Ala Ala Gln Ala Thr Tyr Ser Gly Leu
 35 40 45

Glu Ser Gln Ser Val Ser Gly Cys Tyr Gly Ala Gly Tyr Ser Gly Gln
 50 55 60

Asn Ser Met Gly Gly Tyr Asp
 65 70

<210> 261

<211> 592

<212> PRT

<213> Homo sapiens

<400> 261

Met Ala Pro Gly Gln Leu Ala Leu Phe Ser Val Ser Asp Lys Thr Gly
 1 5 10 15

Leu Val Glu Phe Ala Arg Asn Leu Thr Ala Leu Gly Leu Asn Leu Val
 20 25 30

Ala Ser Gly Gly Thr Ala Lys Ala Leu Arg Asp Ala Gly Leu Ala Val
 35 40 45

Arg Asp Val Ser Glu Leu Thr Gly Phe Pro Glu Met Leu Gly Gly Arg
 50 55 60

Val Lys Thr Leu His Pro Ala Val His Ala Gly Ile Leu Ala Arg Asn
 65 70 75 80

Ile Pro Glu Asp Asn Ala Asp Met Ala Arg Leu Asp Phe Asn Leu Ile
 85 90 95

Arg Val Val Ala Cys Asn Leu Tyr Pro Phe Val Lys Thr Val Ala Ser
 100 105 110

Pro Gly Val Thr Val Glu Glu Ala Val Glu Gln Ile Asp Ile Gly Gly
 115 120 125

Val Thr Leu Leu Arg Ala Ala Ala Lys Asn His Ala Arg Val Thr Val
 130 135 140

Val Cys Glu Pro Glu Asp Tyr Val Val Val Ser Thr Glu Met Gln Ser
 145 150 155 160

Ser Glu Ser Lys Asp Thr Ser Leu Glu Thr Arg Arg Gln Leu Ala Leu

165	170	175
Lys Ala Phe Thr His Thr Ala Gln Tyr Asp Glu Ala Ile Ser Asp Tyr		
180	185	190
Phe Arg Lys Gln Tyr Ser Lys Gly Val Ser Gln Met Pro Leu Arg Tyr		
195	200	205
Gly Met Asn Pro His Gln Thr Pro Ala Gln Leu Tyr Thr Leu Gln Pro		
210	215	220
Lys Leu Pro Ile Thr Val Leu Asn Gly Ala Pro Gly Phe Ile Asn Leu		
225	230	235
Cys Asp Ala Leu Asn Ala Trp Gln Leu Val Lys Glu Leu Lys Glu Ala		
245	250	255
Leu Gly Ile Pro Ala Ala Ala Ser Phe Lys His Val Ser Pro Ala Gly		
260	265	270
Ala Ala Val Gly Ile Pro Leu Ser Glu Asp Glu Ala Lys Val Cys Met		
275	280	285
Val Tyr Asp Leu Tyr Lys Thr Leu Thr Pro Ile Ser Ala Ala Tyr Ala		
290	295	300
Arg Ala Arg Gly Ala Asp Arg Met Ser Ser Phe Gly Asp Phe Val Ala		
305	310	315
Leu Ser Asp Val Cys Asp Val Pro Thr Ala Lys Ile Ile Ser Arg Glu		
325	330	335
Val Ser Asp Gly Ile Ile Ala Pro Gly Tyr Glu Glu Glu Ala Leu Thr		
340	345	350
Ile Leu Ser Lys Lys Lys Asn Gly Asn Tyr Cys Val Leu Gln Met Asp		
355	360	365
Gln Ser Tyr Lys Pro Asp Glu Asn Glu Val Arg Thr Leu Phe Gly Leu		
370	375	380
His Leu Ser Gln Lys Arg Asn Asn Gly Val Val Asp Lys Ser Leu Phe		
385	390	395
Ser Asn Val Val Thr Lys Asn Lys Asp Leu Pro Glu Ser Ala Leu Arg		
405	410	415
Asp Leu Ile Val Ala Thr Ile Ala Val Lys Tyr Thr Gln Ser Asn Ser		

420	425	430
Val Cys Tyr Ala Lys Asn Gly Gln Val Ile Gly Ile Gly Ala Gly Gln		
435	440	445
Gln Ser Arg Ile His Cys Thr Arg Leu Ala Gly Asp Lys Ala Asn Tyr		
450	455	460
Trp Trp Leu Arg His His Pro Gln Val Leu Ser Met Lys Phe Lys Thr		
465	470	475
Gly Val Lys Arg Ala Glu Ile Ser Asn Ala Ile Asp Gln Tyr Val Thr		
485	490	495
Gly Thr Ile Gly Glu Asp Glu Asp Leu Ile Lys Trp Lys Ala Leu Phe		
500	505	510
Glu Glu Val Pro Glu Leu Leu Thr Glu Ala Glu Lys Lys Glu Trp Val		
515	520	525
Glu Lys Leu Thr Glu Val Ser Ile Ser Ser Asp Ala Phe Phe Pro Phe		
530	535	540
Arg Asp Asn Val Asp Arg Ala Lys Arg Ser Gly Val Ala Tyr Ile Ala		
545	550	555
Ala Pro Ser Gly Ser Ala Ala Asp Lys Val Val Ile Glu Ala Cys Asp		
565	570	575
Glu Leu Gly Ile Ile Leu Ala His Thr Asn Leu Arg Leu Phe His His		
580	585	590

<210> 262

<211> 62

<212> PRT

<213> Homo sapiens

<400> 262

Met Phe Glu Leu Leu Pro Asn Cys Met Leu Phe Ile Leu Asn Ser Pro
1 5 10 15

Ser Asp Arg Ile Pro Arg Pro Arg Glu Val Lys Lys Thr Ser Pro Arg
20 25 30

Ser Ile Thr Leu Leu Leu Thr Ala Pro Asn Leu Leu Asp Ser Lys Ser
 35 40 45

Asn Gly Phe Pro Gly Thr Met Met Leu Val Asp Leu Lys Lys
 50 55 60

<210> 263

<211> 43

<212> PRT

<213> Homo sapiens

<400> 263

Met Thr Ala Leu Phe Pro Gly Leu Ala Pro Glu Thr Glu Gln Pro Asp
 1 5 10 15

Ile His Thr Pro Arg Arg Gln Leu Glu Val Pro Pro Gly Asn Gln Asn
 20 25 30

His Pro Gln Arg Arg Pro Pro Asp Thr Asp Ile
 35 40

<210> 264

<211> 303

<212> PRT

<213> Homo sapiens

<400> 264

Met Lys Pro Thr Gly Thr Asp Pro Arg Ile Leu Ser Ile Ala Ala Glu
 1 5 10 15

Val Ala Lys Ser Pro Glu Gln Asn Val Pro Val Ile Leu Leu Lys Leu
 20 25 30

Lys Glu Ile Ile Asn Ile Thr Pro Leu Gly Ser Ser Glu Leu Lys Lys
 35 40 45

Ile Lys Gln Asp Ile Tyr Cys Tyr Asp Leu Ile Gln Tyr Cys Leu Leu
 50 55 60

Val Leu Ser Gln Asp Tyr Ser Arg Ile Gln Gly Gly Trp Thr Thr Ile
 65 70 75 80

Ser Gln Leu Thr Gln Ile Leu Ser His Cys Cys Val Gly Leu Glu Pro
 85 90 95

Gly Glu Asp Ala Glu Glu Phe Tyr Asn Glu Leu Leu Pro Ser Ala Ala

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100	105	110
Glu Asn Phe Leu Val Leu Gly Arg Gln Leu Gln Thr Cys Phe Ile Asn		
115	120	125
Ala Ala Lys Ala Glu Glu Lys Asp Glu Leu Leu His Phe Phe Gln Ile		
130	135	140
Val Thr Asp Ser Leu Phe Trp Leu Leu Gly Gly His Val Glu Leu Ile		
145	150	155 160
Gln Asn Val Leu Gln Ser Asp His Phe Leu His Leu Leu Gln Ala Asp		
165	170	175
Asn Val Gln Ile Gly Ser Ala Val Met Met Met Leu Gln Asn Ile Leu		
180	185	190
Gln Ile Asn Ser Gly Asp Leu Leu Arg Ile Gly Arg Lys Ala Leu Tyr		
195	200	205
Ser Ile Leu Asp Glu Val Ile Phe Lys Leu Phe Ser Thr Pro Ser Pro		
210	215	220
Val Ile Arg Ser Thr Ala Thr Lys Leu Leu Leu Leu Met Ala Glu Ser		
225	230	235 240
His Gln Glu Ile Leu Ile Leu Leu Arg Gln Ser Thr Cys Tyr Lys Gly		
245	250	255
Leu Arg Arg Leu Leu Ser Lys Gln Glu Thr Gly Thr Glu Phe Ser Gln		
260	265	270
Glu Leu Arg Gln Leu Val Gly Leu Leu Ser Pro Met Val Tyr Gln Glu		
275	280	285
Val Glu Glu Gln Ile Gln Thr Ile Lys Asp Val Ala Gly Asp Lys		
290	295	300

<210> 265

<211> 264

<212> PRT

<213> Homo sapiens

<400> 265

Met Leu Leu Glu Ile Asn Arg Gln Lys Glu Glu Glu Asp Leu Lys Leu
1 5 10 15

Gln Leu Gln Leu Gln Arg Gln Arg Ala Met Arg Leu Ser Arg Glu Leu
 20 25 30

Gln Leu Ser Met Leu Glu Ile Val His Pro Gly Gln Val Glu Lys His
 35 40 45

Tyr Arg Glu Met Glu Glu Lys Ser Ala Leu Ile Ile Gln Lys His Trp
 50 55 60

Arg Gly Tyr Arg Glu Arg Lys Asn Phe His Gln Gln Arg Gln Ser Leu
 65 70 75 80

Ile Glu Tyr Lys Ala Ala Val Thr Leu Gln Arg Ala Ala Leu Lys Phe
 85 90 95

Leu Ala Lys Tyr Arg Lys Lys Lys Lys Leu Phe Ala Pro Trp Arg Gly
 100 105 110

Leu Gln Glu Leu Thr Asp Ala Arg Arg Val Glu Leu Lys Lys Arg Val
 115 120 125

Asp Asp Tyr Val Arg Arg His Leu Gly Ser Pro Met Ser Asp Val Val
 130 135 140

Ser Arg Glu Leu His Ala Gln Ala Gln Glu Arg Leu Gln His Tyr Phe
 145 150 155 160

Met Gly Arg Ala Leu Glu Glu Arg Ala Gln Gln His Arg Glu Ala Leu
 165 170 175

Ile Ala Gln Ile Ser Thr Asn Val Glu Gln Leu Met Lys Ala Pro Ser
 180 185 190

Leu Lys Glu Ala Glu Gly Lys Glu Pro Glu Leu Phe Leu Ser Arg Ser
 195 200 205

Arg Pro Val Ala Ala Lys Ala Lys Gln Ala His Leu Thr Thr Leu Lys
 210 215 220

His Ile Gln Ala Pro Trp Trp Lys Lys Leu Gly Glu Glu Ser Gly Asp
 225 230 235 240

Glu Ile Asp Val Pro Lys Asp Glu Leu Ser Ile Glu Leu Glu Asn Leu
 245 250 255

Phe Ile Gly Gly Thr Lys Pro Pro
 260

<210> 266

<211> 248

<212> PRT

<213> Homo sapiens

<400> 266

Met Ser Gly Gly Gly Val Ile Arg Gly Pro Ala Gly Asn Asn Asp Cys
 1 5 10 15

Arg Ile Tyr Val Gly Asn Leu Pro Pro Asp Ile Arg Thr Lys Asp Ile
 20 25 30

Glu Asp Val Phe Tyr Lys Tyr Gly Ala Ile Arg Asp Ile Asp Leu Lys
 35 40 45

Asn Arg Arg Gly Gly Pro Pro Phe Ala Phe Val Glu Phe Glu Asp Pro
 50 55 60

Arg Asp Ala Glu Asp Ala Val Tyr Gly Arg Asp Gly Tyr Asp Tyr Asp
 65 70 75 80

Gly Tyr Arg Leu Arg Val Glu Phe Pro Arg Ser Gly Arg Gly Thr Gly
 85 90 95

Arg Gly Gly Gly Gly Gly Gly Gly Gly Gly Ala Pro Arg Gly Arg Tyr
 100 105 110

Gly Pro Pro Ser Arg Arg Ser Glu Asn Arg Val Val Val Ser Gly Leu
 115 120 125

Pro Pro Ser Gly Ser Trp Gln Asp Leu Lys Asp His Met Arg Glu Ala
 130 135 140

Gly Asp Val Cys Tyr Ala Asp Val Tyr Arg Asp Gly Thr Gly Val Val
 145 150 155 160

Glu Phe Val Arg Lys Glu Asp Met Thr Tyr Ala Val Arg Lys Leu Asp
 165 170 175

Asn Thr Lys Phe Arg Ser His Glu Gly Glu Thr Ala Tyr Ile Arg Val
 180 185 190

Lys Val Asp Gly Pro Arg Ser Pro Ser Tyr Gly Arg Ser Arg Ser Arg
 195 200 205

Ser Arg Ser Arg Ser Arg Ser Arg Ser Arg Ser Asn Ser Arg Ser Arg
 210 215 220

Ser Tyr Ser Pro Arg Arg Ser Arg Gly Ser Pro Arg Tyr Ser Pro Arg
 225 230 235 240

His Ser Arg Ser Arg Ser Arg Thr
 245

<210> 267

<211> 313

<212> PRT

<213> Homo sapiens

<400> 267

Met Pro Val Ala Gly Ser Glu Leu Pro Arg Arg Pro Leu Pro Pro Ala
 1 5 10 15

Ala Gln Glu Arg Asp Ala Glu Pro Arg Pro Pro His Gly Glu Leu Gln
 20 25 30

Tyr Leu Gly Gln Ile Gln His Ile Leu Arg Cys Gly Val Arg Lys Asp
 35 40 45

Asp Arg Thr Gly Thr Gly Thr Leu Ser Val Phe Gly Met Gln Ala Arg
 50 55 60

Tyr Ser Leu Arg Asp Glu Phe Pro Leu Leu Thr Thr Lys Arg Val Phe
 65 70 75 80

Trp Lys Gly Val Leu Glu Glu Leu Leu Trp Phe Ile Lys Gly Ser Thr
 85 90 95

Asn Ala Lys Glu Leu Ser Ser Lys Gly Val Lys Ile Trp Asp Ala Asn
 100 105 110

Gly Ser Arg Asp Phe Leu Asp Ser Leu Gly Phe Ser Thr Arg Glu Glu
 115 120 125

Gly Asp Leu Gly Pro Val Tyr Gly Phe Gln Trp Arg His Phe Gly Ala
 130 135 140

Glu Tyr Arg Asp Met Glu Ser Asp Tyr Ser Gly Gln Gly Val Asp Gln
 145 150 155 160

Leu Gln Arg Val Ile Asp Thr Ile Lys Thr Asn Pro Asp Asp Arg Arg
 165 170 175

Ile Ile Met Cys Ala Trp Asn Pro Arg Asp Leu Pro Leu Met Ala Leu

180	185	190
Pro Pro Cys His Ala Leu Cys Gln Phe Tyr Val Val Asn Ser Glu Leu		
195	200	205
Ser Cys Gln Leu Tyr Gln Arg Ser Gly Asp Met Gly Leu Gly Val Pro		
210	215	220
Phe Asn Ile Ala Ser Tyr Ala Leu Leu Thr Tyr Met Ile Ala His Ile		
225	230	235
Thr Gly Leu Lys Pro Gly Asp Phe Ile His Thr Leu Gly Asp Ala His		
245	250	255
Ile Tyr Leu Asn His Ile Glu Pro Leu Lys Ile Gln Leu Gln Arg Glu		
260	265	270
Pro Arg Pro Phe Pro Lys Leu Arg Ile Leu Arg Lys Val Glu Lys Ile		
275	280	285
Asp Asp Phe Lys Ala Glu Asp Phe Gln Ile Glu Gly Tyr Asn Pro His		
290	295	300
Pro Thr Ile Lys Met Glu Met Ala Val		
305	310	

<210> 268
 <211> 511
 <212> PRT
 <213> Homo sapiens

<400> 268
 Met Ala Val Arg Leu Ala Gly Gly Leu Gln Lys Met Val Ala Leu Leu
 1 5 10 15
 Asn Lys Thr Asn Val Lys Phe Leu Ala Ile Thr Thr Asp Cys Leu Gln
 20 25 30
 Ile Leu Ala Tyr Gly Asn Gln Glu Ser Lys Leu Ile Ile Leu Ala Ser
 35 40 45
 Gly Gly Pro Gln Ala Leu Val Asn Ile Met Arg Thr Tyr Thr Tyr Glu
 50 55 60
 Lys Leu Leu Trp Thr Thr Ser Arg Val Leu Lys Val Leu Ser Val Cys
 65 70 75 80

Ser	Ser	Asn	Lys	Pro	Ala	Ile	Val	Glu	Ala	Gly	Gly	Met	Gln	Ala	Leu	85	90	95	
Gly	Leu	His	Leu	Thr	Asp	Pro	Ser	Gln	Arg	Leu	Val	Gln	Asn	Cys	Leu	100	105	110	
Trp	Thr	Leu	Arg	Asn	Leu	Ser	Asp	Ala	Ala	Thr	Lys	Gln	Glu	Gly	Met	115	120	125	
Glu	Gly	Leu	Leu	Gly	Thr	Leu	Val	Gln	Leu	Leu	Gly	Ser	Asp	Asp	Ile	130	135	140	
Asn	Val	Val	Thr	Cys	Ala	Ala	Gly	Ile	Leu	Ser	Asn	Leu	Thr	Cys	Asn	145	150	155	160
Asn	Tyr	Lys	Asn	Lys	Met	Met	Val	Cys	Gln	Val	Gly	Gly	Ile	Glu	Ala	165	170	175	
Leu	Val	Arg	Thr	Val	Leu	Arg	Ala	Gly	Asp	Arg	Glu	Asp	Ile	Thr	Glu	180	185	190	
Pro	Ala	Ile	Cys	Ala	Leu	Arg	His	Leu	Thr	Ser	Arg	His	Gln	Glu	Ala	195	200	205	
Glu	Met	Ala	Gln	Asn	Ala	Val	Arg	Leu	His	Tyr	Gly	Leu	Pro	Val	Val	210	215	220	
Val	Lys	Leu	Leu	His	Pro	Pro	Ser	His	Trp	Pro	Leu	Ile	Lys	Ala	Thr	225	230	235	240
Val	Gly	Leu	Ile	Arg	Asn	Leu	Ala	Leu	Cys	Pro	Ala	Asn	His	Ala	Pro	245	250	255	
Leu	Arg	Glu	Gln	Gly	Ala	Ile	Pro	Arg	Leu	Val	Gln	Leu	Leu	Val	Arg	260	265	270	
Ala	His	Gln	Asp	Thr	Gln	Arg	Arg	Thr	Ser	Met	Gly	Gly	Thr	Gln	Gln	275	280	285	
Gln	Phe	Val	Glu	Gly	Val	Arg	Met	Glu	Glu	Ile	Val	Glu	Gly	Cys	Thr	290	295	300	
Gly	Ala	Leu	His	Ile	Leu	Ala	Arg	Asp	Val	His	Asn	Arg	Ile	Val	Ile	305	310	315	320
Arg	Gly	Leu	Asn	Thr	Ile	Pro	Leu	Phe	Val	Gln	Leu	Leu	Tyr	Ser	Pro	325	330	335	

Ile Glu Asn Ile Gln Arg Val Ala Ala Gly Val Leu Cys Glu Leu Ala
 340 345 350

Gln Asp Lys Glu Ala Ala Glu Ala Ile Glu Ala Glu Gly Ala Thr Ala
 355 360 365

Pro Leu Thr Glu Leu Leu His Ser Arg Asn Glu Gly Val Ala Thr Tyr
 370 375 380

Ala Ala Ala Val Leu Phe Arg Met Ser Glu Asp Lys Pro Gln Asp Tyr
 385 390 395 400

Lys Lys Arg Leu Ser Val Glu Leu Thr Ser Ser Leu Phe Arg Thr Glu
 405 410 415

Pro Met Ala Trp Asn Glu Thr Ala Asp Leu Gly Leu Asp Ile Gly Ala
 420 425 430

Gln Gly Glu Pro Leu Gly Tyr Arg Gln Asp Asp Pro Ser Tyr Arg Ser
 435 440 445

Phe His Ser Gly Gly Tyr Gly Gln Asp Ala Leu Gly Met Asp Pro Met
 450 455 460

Met Glu His Glu Met Gly Gly His His Pro Gly Ala Asp Tyr Pro Val
 465 470 475 480

Asp Gly Leu Pro Asp Leu Gly His Ala Gln Asp Leu Met Asp Gly Leu
 485 490 495

Pro Pro Gly Asp Ser Asn Gln Leu Ala Trp Phe Asp Thr Asp Leu
 500 505 510

<210> 269

<211> 128

<212> PRT

<213> Homo sapiens

<400> 269

Met Phe Asp Val Thr Ser Arg Val Thr Tyr Lys Asn Val Pro Asn Trp
 1 5 10 15

His Arg Asp Leu Val Arg Val Cys Glu Asn Ile Pro Ile Val Leu Cys
 20 25 30

Gly Asn Lys Val Asp Ile Lys Asp Arg Lys Val Lys Ala Lys Ser Ile
 35 40 45

Val Phe His Arg Lys Lys Asn Leu Gln Tyr Tyr Asp Ile Ser Ala Lys
 50 55 60

Ser Asn Tyr Asn Phe Glu Lys Pro Phe Leu Trp Leu Ala Arg Lys Leu
 65 70 75 80

Ile Gly Asp Pro Asn Leu Glu Phe Val Ala Met Pro Ala Leu Ala Pro
 85 90 95

Pro Glu Val Val Met Asp Pro Ala Leu Ala Ala Gln Tyr Glu His Asp
 100 105 110

Leu Glu Val Ala Gln Thr Thr Ala Leu Pro Asp Glu Asp Asp Asp Leu
 115 120 125

<210> 270

<211> 506

<212> PRT

<213> Homo sapiens

<400> 270

Met Glu Asp His Gln His Val Pro Ile Asp Ile Gln Thr Ser Lys Leu
 1 5 10 15

Leu Asp Trp Leu Val Asp Arg Arg His Cys Ser Leu Lys Trp Gln Ser
 20 25 30

Leu Val Leu Thr Ile Arg Glu Lys Ile Asn Ala Ala Ile Gln Asp Met
 35 40 45

Pro Glu Ser Glu Glu Ile Ala Gln Leu Leu Ser Gly Ser Tyr Ile His
 50 55 60

Tyr Phe His Cys Leu Arg Ile Leu Asp Leu Leu Lys Gly Thr Glu Ala
 65 70 75 80

Ser Thr Lys Asn Ile Phe Gly Arg Tyr Ser Ser Gln Arg Met Lys Asp
 85 90 95

Trp Gln Glu Ile Ile Ala Leu Tyr Glu Lys Asp Asn Thr Tyr Leu Val
 100 105 110

Glu Leu Ser Ser Leu Leu Val Arg Asn Val Asn Tyr Glu Ile Pro Ser

115	120	125
Leu Lys Lys Gln Ile Ala Lys Cys Gln Gln Leu Gln Gln Glu Tyr Ser		
130	135	140
Arg Lys Glu Glu Glu Cys Gln Ala Gly Ala Ala Glu Met Arg Glu Gln		
145	150	155
		160
Phe Tyr His Ser Cys Lys Gln Tyr Gly Ile Thr Gly Glu Asn Val Arg		
	165	170
		175
Gly Glu Leu Leu Ala Leu Val Lys Asp Leu Pro Ser Gln Leu Ala Glu		
	180	185
		190
Ile Gly Ala Ala Ala Gln Gln Ser Leu Gly Glu Ala Ile Asp Val Tyr		
	195	200
		205
Gln Ala Ser Val Gly Phe Val Cys Glu Ser Pro Thr Glu Gln Val Leu		
	210	215
		220
Pro Met Leu Arg Phe Val Gln Lys Arg Gly Asn Ser Thr Val Tyr Glu		
	225	230
		235
		240
Trp Arg Thr Gly Thr Glu Pro Ser Val Val Glu Arg Pro His Leu Glu		
	245	250
		255
Glu Leu Pro Glu Gln Val Ala Glu Asp Ala Ile Asp Trp Gly Asp Phe		
	260	265
		270
Gly Val Glu Ala Val Ser Glu Gly Thr Asp Ser Gly Ile Ser Ala Glu		
	275	280
		285
Ala Ala Gly Ile Asp Trp Gly Ile Phe Pro Glu Ser Asp Ser Lys Asp		
	290	295
		300
Pro Gly Gly Asp Gly Ile Asp Trp Gly Asp Asp Ala Val Ala Leu Gln		
	305	310
		315
		320
Ile Thr Val Leu Glu Ala Gly Thr Gln Ala Pro Glu Gly Val Ala Arg		
	325	330
		335
Gly Pro Asp Ala Leu Thr Leu Leu Glu Tyr Thr Glu Thr Arg Asn Gln		
	340	345
		350
Phe Leu Asp Glu Leu Met Glu Leu Glu Ile Phe Leu Ala Gln Arg Ala		
	355	360
		365
Val Glu Leu Ser Glu Glu Ala Asp Val Leu Ser Val Ser Gln Phe Gln		

370	375	380
Leu Ala Pro Ala Ile Leu Gln Gly Gln Thr Lys Glu Lys Met Val Thr		
385	390	395 400
Met Val Ser Val Leu Glu Asp Leu Ile Gly Lys Leu Thr Ser Leu Gln		
405	410	415
Leu Gln His Leu Phe Met Ile Leu Ala Ser Pro Arg Tyr Val Asp Arg		
420	425	430
Val Thr Glu Phe Leu Gln Gln Lys Leu Lys Gln Ser Gln Leu Leu Ala		
435	440	445
Leu Lys Lys Glu Leu Met Val Gln Lys Gln Gln Glu Ala Leu Glu Glu		
450	455	460
Gln Ala Ala Leu Glu Pro Lys Leu Asp Leu Leu Leu Glu Lys Thr Lys		
465	470	475 480
Glu Leu Gln Lys Leu Ile Glu Ala Asp Ile Ser Lys Arg Tyr Ser Gly		
485	490	495
Arg Pro Val Asn Leu Met Gly Thr Ser Leu		
500	505	

<210> 271
 <211> 136
 <212> PRT
 <213> Homo sapiens

<400> 271
Met Thr Ser Leu Cys Met Ala Met Thr Glu Glu Gln His Lys Ser Val
1 5 10 15
Val Ile Asp Cys Ser Ser Ser Gln Pro Gln Phe Cys Asn Ala Gly Ser
20 25 30
Asn Arg Phe Cys Glu Asp Trp Met Gln Ala Phe Leu Asn Gly Ala Lys
35 40 45
Gly Gly Asn Pro Phe Leu Phe Arg Gln Val Leu Glu Asn Phe Lys Leu
50 55 60
Lys Ala Ile Gln Asp Thr Asn Asn Leu Lys Arg Phe Ile Arg Gln Ala
65 70 75 80

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Glu Met Asn His Tyr Ala Leu Phe Lys Cys Tyr Met Phe Leu Lys Asn
85 90 95

Cys Gly Ser Gly Asp Ile Leu Leu Lys Ile Val Lys Val Glu His Glu
100 105 110

Glu Met Pro Glu Ala Lys Asn Val Ile Ala Val Leu Glu Glu Phe Met
115 120 125

Lys Glu Ala Leu Asp Gln Ser Phe
130 135

<210> 272

<211> 509

<212> PRT

<213> Homo sapiens

<400> 272

Met Phe Thr Asn Asp Met Met Glu Cys Lys Gln Asp Glu Ile Val Met
1 5 10 15

Gln Gly Met Asp Pro Ser Ala Leu Glu Ala Leu Ile Asn Phe Ala Tyr
20 25 30

Asn Gly Asn Leu Ala Ile Asp Gln Gln Asn Val Gln Ser Leu Leu Met
35 40 45

Gly Ala Ser Phe Leu Gln Leu Gln Ser Ile Lys Asp Ala Cys Cys Thr
50 55 60

Phe Leu Arg Glu Arg Leu His Pro Lys Asn Cys Leu Gly Val Arg Gln
65 70 75 80

Phe Ala Glu Thr Met Met Cys Ala Val Leu Tyr Asp Ala Ala Asn Ser
85 90 95

Phe Ile His Gln His Phe Val Glu Val Ser Met Ser Glu Glu Phe Leu
100 105 110

Ala Leu Pro Leu Glu Asp Val Leu Glu Leu Val Ser Arg Asp Glu Leu
115 120 125

Asn Val Lys Ser Glu Glu Gln Val Phe Glu Ala Ala Leu Ala Trp Val
130 135 140

Arg Tyr Asp Arg Glu Gln Arg Gly Pro Tyr Leu Pro Glu Leu Leu Ser
145 150 155 160

Asn Ile Arg Leu Pro Leu Cys Arg Pro Gln Phe Leu Ser Asp Arg Val		
165	170	175
Gln Gln Asp Asp Leu Val Arg Cys Cys His Lys Cys Arg Asp Leu Val		
180	185	190
Asp Glu Ala Lys Asp Tyr His Leu Met Pro Glu Arg Arg Pro His Leu		
195	200	205
Pro Ala Phe Arg Thr Arg Pro Arg Cys Cys Thr Ser Ile Ala Gly Leu		
210	215	220
Ile Tyr Ala Val Gly Gly Leu Asn Ser Ala Gly Asp Ser Leu Asn Val		
225	230	235 240
Val Glu Val Phe Asp Pro Ile Ala Asn Cys Trp Glu Arg Cys Arg Pro		
245	250	255
Met Thr Thr Ala Arg Ser Arg Val Gly Val Ala Val Val Asn Gly Leu		
260	265	270
Leu Tyr Ala Ile Gly Gly Tyr Asp Gly Gln Leu Arg Leu Ser Thr Val		
275	280	285
Glu Ala Tyr Asn Pro Glu Thr Asp Thr Trp Thr Arg Val Gly Ser Met		
290	295	300
Asn Ser Lys Arg Ser Ala Met Gly Thr Val Val Leu Asp Gly Gln Ile		
305	310	315 320
Tyr Val Cys Gly Gly Tyr Asp Gly Asn Ser Ser Leu Ser Ser Val Glu		
325	330	335
Thr Tyr Ser Pro Glu Thr Asp Lys Trp Thr Val Val Thr Ser Met Ser		
340	345	350
Ser Asn Arg Ser Ala Ala Gly Val Thr Val Phe Glu Gly Arg Ile Tyr		
355	360	365
Val Ser Gly Gly His Asp Gly Leu Gln Ile Phe Ser Ser Val Glu His		
370	375	380
Tyr Asn His His Thr Ala Thr Trp His Pro Ala Ala Gly Met Leu Asn		
385	390	395 400
Lys Arg Cys Arg His Gly Ala Ala Ser Leu Gly Ser Lys Met Phe Val		
405	410	415

Cys Gly Gly Tyr Asp Gly Ser Gly Phe Leu Ser Ile Ala Glu Met Tyr
 420 425 430

Ser Ser Val Ala Asp Gln Trp Cys Leu Ile Val Pro Met His Thr Arg
 435 440 445

Arg Ser Arg Val Ser Leu Val Ala Ser Cys Gly Arg Leu Tyr Ala Val
 450 455 460

Gly Gly Tyr Asp Gly Gln Ser Asn Leu Ser Ser Val Glu Met Tyr Asp
 465 470 475 480

Pro Glu Thr Asp Cys Trp Thr Phe Met Ala Pro Met Ala Cys His Glu
 485 490 495

Gly Gly Val Gly Val Gly Cys Ile Pro Leu Leu Thr Ile
 500 505

<210> 273

<211> 49

<212> PRT

<213> Homo sapiens

<400> 273

Met Ser Phe Ser Ala Ile Leu Ser Pro Phe Ser Ser Leu Ser Val Asn
 1 5 10 15

Val Arg Asn Leu Arg Gln Arg Gly Lys Gly Arg Gln Asn Ser Arg Ile
 20 25 30

Leu Thr Leu Ile Val Lys Ile Leu Phe Lys Thr Trp His Leu Ile Phe
 35 40 45

Leu

<210> 274

<211> 109

<212> PRT

<213> Homo sapiens

<400> 274

Met Glu Ser His Ser Val Thr Gln Ala Gly Val Gln Trp His Asp Leu
 1 5 10 15

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Gly Ser Leu His Ser Pro Leu Leu Gly Ser Ser Asp Ser Pro Thr Ser
20 25 30

Ala Ser Arg Val Ala Gly Ile Thr Gly Met Gln His His Thr Gln Leu
35 40 45

Ile Phe Leu Phe Leu Val Glu Met Gly Phe His His Val Gly Gln Ala
50 55 60

Gly Leu Lys Leu Leu Thr Ser Gly Asp Pro Pro Ala Ser Ala Ser Gln
65 70 75 80

Ser Ala Gly Ile Thr Gly Val Gly His His Thr Trp Pro Ile Met Glu
85 90 95

Asp Phe Leu Met Val Met Phe Glu Leu Gly Phe Gly Glu
100 105

<210> 275

<211> 54

<212> PRT

<213> Homo sapiens

<400> 275

Met Glu Ser Asn Ile Ile Tyr Thr Pro Ser Leu Pro Leu Phe Leu Pro
1 5 10 15

Pro Phe Leu Pro Pro Ser Leu Pro Pro Phe Leu Pro Pro Phe Ser Leu
20 25 30

Ser Leu Ser Leu Pro Ala Ser Leu Pro Phe Phe Leu Leu Cys Leu Leu
35 40 45

Pro Cys Asp Trp Gly Lys
50

<210> 276

<211> 66

<212> PRT

<213> Homo sapiens

<400> 276

Met Leu Leu Tyr Arg Leu Ala Gln Leu Gly Leu Tyr Phe Leu Tyr Ser
1 5 10 15

Met Pro Val Glu His Gln Met Leu Asn Thr Ser Thr Cys Cys Asp Phe

	20		25		30										
Ala	Ile	Pro	Ala	His	Ile	Thr	His	Leu	Ile	Ser	Phe	Val	Gly	Gly	His
	35		40		45										
Val	Gly	Trp	Pro	Thr	His	Trp	Gln	Val	Asn	Ser	Leu	Ile	Trp	Thr	Met
	50		55		60										
Ser	His														
	65														

<210> 277
 <211> 180
 <212> PRT
 <213> Homo sapiens

Met	Arg	Pro	Leu	Thr	Glu	Glu	Glu	Thr	Arg	Val	Met	Phe	Glu	Lys	Ile
1				5				10					15		
Ala	Lys	Tyr	Ile	Gly	Glu	Asn	Leu	Gln	Leu	Leu	Val	Asp	Arg	Pro	Asp
			20				25					30			
Gly	Thr	Tyr	Cys	Phe	Arg	Leu	His	Asn	Asp	Arg	Val	Tyr	Tyr	Val	Ser
		35					40					45			
Glu	Lys	Ile	Met	Lys	Leu	Ala	Ala	Asn	Ile	Ser	Gly	Asp	Lys	Leu	Val
	50				55						60				
Ser	Leu	Gly	Thr	Cys	Phe	Gly	Lys	Phe	Thr	Lys	Thr	His	Lys	Phe	Arg
65					70				75					80	
Leu	His	Val	Thr	Ala	Leu	Asp	Tyr	Leu	Ala	Pro	Tyr	Ala	Lys	Tyr	Lys
				85				90					95		
Val	Trp	Ile	Lys	Pro	Gly	Ala	Glu	Gln	Ser	Phe	Leu	Tyr	Gly	Asn	His
		100					105					110			
Val	Leu	Lys	Ser	Gly	Leu	Gly	Arg	Ile	Thr	Glu	Asn	Thr	Ser	Gln	Tyr
	115						120					125			
Gln	Gly	Val	Val	Val	Tyr	Ser	Met	Ala	Asp	Ile	Pro	Leu	Gly	Phe	Gly
	130					135					140				
Val	Ala	Ala	Lys	Ser	Thr	Gln	Asp	Cys	Arg	Lys	Val	Asp	Pro	Met	Ala
145					150					155				160	

Ile Val Val Phe His Gln Ala Asp Ile Gly Glu Tyr Val Arg His Glu
 165 170 175

Glu Thr Leu Thr
 180

<210> 278
 <211> 34
 <212> PRT
 <213> Homo sapiens

<400> 278
 Met Gly Leu Glu Arg Gly Phe Asp Pro Arg Ser Leu Cys Ala Phe Ala
 1 5 10 15

Ala Glu Pro His Asn Leu Ser Phe Gln Lys His Phe Gln Asn Ala Asn
 20 25 30

Ile Phe

<210> 279
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 279
 Met Leu Arg Val Asn Phe Phe Phe Phe Phe Phe Phe Phe Ser Phe
 1 5 10 15

Ser Leu Arg Leu Gly Leu Ala Leu Leu Pro Arg Leu Glu Trp Ser Gly
 20 25 30

Val Ile Leu Ala Tyr Cys Ser Leu Cys Leu Pro Gly Ser Ser Ser Pro
 35 40 45

Ala Ser Ala Ser Gly Val Ala Gly Thr Thr Gly Ser Cys His His Gly
 50 55 60

Gln Pro Thr Phe Ala Cys Phe Val Lys Met Gly Ser His Ser Val Ala
 65 70 75 80

Gln Ala Gly Leu Lys Leu Leu Gly Ser Gly Asp Pro Pro Val Ser Ala
 85 90 95

Ser Gln Ser Ala Gly Ile Thr Ile Val Ser His His Val Gln Leu Glu

100	105	110
Gly Ser Thr Ser Phe Thr Phe Cys Lys His Ile Cys Ile Phe Thr Pro		
115	120	125
Pro Phe Pro Ser Phe Ser Leu Phe Ile Ser His Phe Tyr Ile Asp Leu		
130	135	140
Leu Phe Tyr Asn Lys Thr Leu Leu Pro Lys Lys Lys Lys Lys Lys Lys		
145	150	155
Lys Lys Lys Lys Lys Lys Lys Lys		
165		

<210> 280
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 280
Met Met Ile Trp Ile His Gln Asp Leu Phe Tyr Ala Gln Gly Gln Phe
1 5 10 15
Leu Phe Phe Phe Phe Phe Phe Phe Phe Phe Phe Phe Glu Thr Gly Ser
20 25 30
Arg Phe Val Ala Gln Ala Gly Val Glu Trp Arg Asp Leu Gly Leu Leu
35 40 45
Gln Pro Leu Pro Pro Arg Leu Glu Gln Ser Cys Leu Ser Leu Arg Ser
50 55 60
Ser Trp Asp His Arg Phe Met Pro Pro Trp Pro Ala Asn Phe Cys Met
65 70 75 80
Phe Cys Lys Asp Gly Val Ser Gln Cys Cys Pro Gly Trp Ser Gln Thr
85 90 95
Pro Gly Leu Arg Arg Ser Thr Cys Leu Ser Leu Pro Glu Cys Trp Asp
100 105 110
Tyr Asn Cys Glu Pro Pro Arg Pro Ala Gly Arg Val Asn Ile Phe Tyr
115 120 125
Ile Leu Gln Ala His Leu His Phe His Pro Thr Leu Pro Leu Leu Leu
130 135 140

Pro Phe Tyr Ile Pro Phe Leu Tyr Arg Ser Leu Ile Leu Gln
 145 150 155

<210> 281
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 281
 Met Pro Leu Gly Pro Val Gln Val Tyr Leu Ser Leu Ile Ser Glu Ser
 1 5 10 15

Cys Ser Ser Cys Leu Thr Leu Pro His Gly Ser Ser Val His Leu Ser
 20 25 30

Ile Thr Val Leu Asn Pro Phe Ser Ile Ser Val
 35 40

<210> 282
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 282
 Met Lys Lys Leu Thr Leu Pro Met Gly Leu Pro Pro Phe Leu Pro Leu
 1 5 10 15

Phe Ser Leu Trp Tyr Pro Ser Arg Val Phe Pro Ser Pro Leu Gln Ser
 20 25 30

Pro Ile Ser His Leu Phe Phe Phe Ser Pro Ser Ser Phe Ser Tyr Cys
 35 40 45

Val Leu Pro Ala Thr Ser His Arg Leu Val Val Tyr Lys
 50 55 60

<210> 283
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 283
 Met Gln Lys Met Leu Pro Glu Ile Asp Gln Asn Lys Asp Arg Met Leu
 1 5 10 15

Glu Ile Leu Glu Gly Lys Gly Leu Ser Phe Leu Phe Pro Leu Leu Lys
 20 25 30

Leu Glu Lys Glu Leu Leu Lys Gln Ile Lys Leu Asp Pro Ser Pro Gln
 35 40 45

Thr Ile Tyr Lys Trp Ile Lys Asp Asn Ile Ser Pro Lys Leu His Val
 50 55 60

Asp Lys Gly Phe Val Asn Ile Leu Met Thr Ser Phe Leu Gln Tyr Ile
 65 70 75 80

Ser Ser Glu Val Asn Pro Pro Ser Asp Glu Thr Asp Ser Ser Ser Ala
 85 90 95

Pro Ser Lys Glu Gln Leu Glu Gln Glu Lys Gln Leu Leu Leu Ser Phe
 100 105 110

Lys Pro Val Met Gln Lys Phe Leu His Asp His Val Asp Leu Gln Val
 115 120 125

Ser Ala Leu Tyr Ala Leu Gln Val His Cys Tyr Asn Ser Asn Phe Pro
 130 135 140

Lys Gly Met Leu Leu Arg Phe Phe Val His Phe Tyr Asp Met Glu Ile
 145 150 155 160

Ile Glu Glu Glu Ala Phe Leu Ala Trp Lys Glu Asp Ile Thr Gln Glu
 165 170 175

Phe Pro Gly Lys Gly Lys Ala Leu Phe Gln Val Asn Gln Trp Leu Thr
 180 185 190

Trp Leu Glu Thr Ala Glu Glu Glu Glu Ser Glu Glu Glu Ala Asp
 195 200 205

<210> 284

<211> 105

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> (80)

<223> "Xaa" may be "Asp" or "Glu".

<400> 284

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Phe Ser Cys Leu Ser Phe Leu Ser Ser Trp Asp Tyr Arg His Ala Pro
1 5 10 15

Pro Cys Leu Ala Asn Phe Ala Phe Leu Val Glu Thr Gly Phe His His
20 25 30

Val Gly Gln Ala Gly Leu Lys Leu Pro Thr Ser Gly Asp Leu Pro Thr
35 40 45

Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Met Ser Tyr Arg Ala Trp
50 55 60

Pro Val Tyr Phe Trp Arg Gln Ser Leu Ala Leu Leu Pro Arg Leu Xaa
65 70 75 80

Gly Ser Gly Ala Thr Leu Asn Ser Ala Ser Arg Val Gln Ala Ile Leu
85 90 95

Val Arg His Leu Pro Ser Ser Trp Gly
100 105

<210> 285

<211> 91

<212> PRT

<213> Homo sapiens

<400> 285

Leu Thr Ala Val Phe Phe Ser Phe Ile His Phe Ala Phe Phe Leu Tyr
1 5 10 15

Phe Arg Phe Asn Ser Thr Phe Lys Lys Ser Tyr Leu Tyr Ile Cys Ile
20 25 30

Phe Ile Phe Ile Phe Gln Asp Leu Ile Cys Leu Phe Phe Ile Met Gly
35 40 45

Tyr Tyr Cys Ser Met Val Gln Asn Leu Leu Phe Phe Pro Lys Leu Leu
50 55 60

Val Ile Phe Lys Ile Phe Val Asn Phe Leu Pro Leu Ala Ser Ser Gln
65 70 75 80

Val Pro Ala Phe Ser Gln Ser Ala Gly Phe Pro
85 90

<210> 286

<211> 75
 <212> PRT
 <213> Homo sapiens

<400> 286

Pro Lys Ser Leu Pro Gly His Pro Leu Ala Tyr Ser Leu Thr Gly His
 1 5 10 15

Ala Pro Ala Val His Thr Gly Ser Tyr Gln Ser Ser Ser Trp Ala Pro
 20 25 30

Phe Gln Thr Ser Glu Glu Ser Phe Gln His Glu Glu Gly Val Gln Asn
 35 40 45

Lys Gln Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 50 55 60

Lys Arg Asn Ile Asn Asn Ala Gly Ser Lys Arg
 65 70 75

<210> 287
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 287

Met Tyr Cys Val Phe Asn Arg Asn Glu Asp Ala Cys Arg Tyr Gly Ser
 1 5 10 15

Ala Ile Gly Val Leu Ala Ser Leu Ala Tyr Gln Arg Tyr Lys Ala Gly
 20 25 30

Val Asp Asp Phe Ile Gln Asn Tyr Val Asp Pro Thr Pro Asp Pro Asn
 35 40 45

Thr Ala Tyr Ala Ser Tyr Pro Gly Ala Ser Val Asp Asn Tyr Gln Gln
 50 55 60

Pro Pro Phe Thr Gln Asn Ala Glu Thr Thr Glu Gly Tyr Gln Pro Pro
 65 70 75 80

Pro Val Tyr

<210> 288
 <211> 117

<212> PRT

<213> Homo sapiens

<400> 288

Met Val Arg Ala Thr Ala Met Pro Thr Ser Leu Ser Arg Cys Thr Ala

1

5

10

15

Cys Ser Thr Ala Thr Arg Met Pro Ala Ala Met Ala Val Pro Ser Gly

20

25

30

Cys Trp Pro Pro Trp Pro Thr Ser Ala Thr Arg Leu Ala Trp Thr Thr

35

40

45

Ser Ser Arg Ile Thr Leu Thr Pro Leu Arg Thr Pro Thr Leu Pro Thr

50

55

60

Pro Pro Thr Gln Val His Leu Trp Thr Thr Thr Asn Ser His Pro Ser

65

70

75

80

Pro Arg Thr Arg Arg Pro Pro Arg Ala Thr Ser Arg Pro Leu Cys Thr

85

90

95

Glu Arg Arg Leu Ala Trp Glu Gly Gly Gln Arg Gly Pro Ser Pro Leu

100

105

110

Pro Trp Thr Phe Pro

115

<210> 289

<211> 1280

<212> DNA

<213> Homo sapiens

<400> 289

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 taactctggt aaagtggata ttgttgccat caatgacccc ttcattgacc tcaactacat 180
 ggttttacatg ttccaatatg attccaccca tggcaaattc catggcacccg tcaaggctga 240
 gaacgggaag cttgtcatca atggaaatcc catcaccatc ttccaggagc gagatccctc 300
 caaaatcaag tggggcgatg ctggcgctga gtacgtcgtg gaggccactg gcgtcttcac 360
 caccatggag aaggctgggg ctcatcttgc ggggggagcc aaaagggtca tcatctctgc 420
 cccctctgct gatgccccca tgttcgtcat ggggtgtgaac catgagaagt atgacaacag 480
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 catccatgac aactttggta tcgtggaagg actcatgacc acagtccatg ccatcactgc 600
 caccagaag actgtggatg gccctccgg gaaactgtgg cgtgatggcc gcggggctct 660
 ccagaacatc atccctgcct ctactggcgc tgccaaggct gtgggcaagg tcatccctga 720
 gctgaacggg aagctcactg gcatggcctt ccgtgtcccc actgccaacg tgtcagtgg 780


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gtccccacc acactgaatc tccccctc acagttgcca thtagacccc ttgaagaggg 1200
gaggggccta gggagccgca cttgtcatg taccatcaat aaagtaccct gtgctcaacc 1260
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<210> 290

<211> 2978

<212> DNA

<213> Homo sapiens

<400> 290

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gcagacaagt taacgagaat tgctattgtc aaccatgaca aatgtaaacc taagaaatgt 180
cgacaggaat gcaaaaagag ttgtcctgta gttcgaatgg gaaaattatg catagagggt 240
acaccccaga gcaaaatagc atggatttcc gaaactcttt gtattggttg tggatatctgt 300
attaagaaat gcccttttgg cgcttatca attgtcaatc taccaagcaa cttggaaaaa 360
gaaaccacac atcgatatig tgccaatgcc ttcaaacttc acaggttgcc tatccctcgt 420
ccaggtgaag ttttgggatt agttggaact aatggtattg gaaagtcaac tgctttaaaa 480
attttagcag gaaaacaaaa gccaaacctt ggaaagtacg atgacctcc tgactggcag 540
gagattttga cttatttccg tggatctgaa ttacaaaatt actttacaaa gattctagaa 600
gatgacctaa aagccatcat caaacctcaa tatgtagacc agattcctaa ggctgcaaag 660
gggacagtgg gatctatttt ggaccgaaaa gatgaaacaa agacacaggc aattgtatgt 720
cagcagcttg atttaacca cctaaaagaa cgaaatgttg aagatctttc aggaggagag 780
ttgcagagat ttgcttgtgc tgtcgtttgc atacagaaag ctgatatatt catgtttgat 840
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<210> 291

<211> 1218

<212> DNA

<213> Homo sapiens

<400> 291

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catcatgtct gaccaggagg caaaccttc aactgaggac ttgggggata agaaggaagg 180
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aatgacaaca catctcaaga aactcaaaga atcatactgt caaagacagg gtgttccaat 300
gaattcactc aggtttctct ttgagggtca gagaattgct gataatcata ctccaaaaga 360
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aacagtttag atattctttt tttttttt ctttccctc aatcctttt ttttttaaa 480
aatagtctt ttgtaatgtg gtgttcaaaa cggaattgaa aactggcacc ccatctctt 540
gaaacatctg gtaatttgaa ttctagtgtc cattattcat tattgtttgt tttcattgtg 600
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<210> 292
 <211> 825
 <212> DNA
 <213> Homo sapiens

<400> 292
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 tatggccaca gaagttgctg ctgacgctct ggggtgaagaa tggaagggtt atgtggtccg 180
 aatcagtggt gggaacgaca aacaaggttt ccccatgaag cagggtgtct tgacctatgg 240
 ccgtgtccgc ctgctactga gtaaggggca ttctgttac agaccaagga gaactggaga 300
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 ccgcctgggc cccaaaagag ctagcagaat ccgcaaactt ttcaatctct cttaaagaaga 480
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 caaagcagcc aagattcagc gtcttggttac tccacgtgtc ctgcagcaca aacggcggcg 600
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 acttttgccc aagagaatga aggaggctaa ggagaagcgc caggaacaaa ttgcgaagag 720
 acgcagactt tcctctctgc gagcttctac ttctaagtct gaatccagtc agaaataaga 780
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<210> 293
 <211> 1978
 <212> DNA
 <213> Homo sapiens

<400> 293
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<210> 294

<211> 895

<212> DNA

<213> Homo sapiens

<400> 294

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<210> 295

<211> 1358

<212> DNA

<213> Homo sapiens

<400> 295

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<210> 296

<211> 2033

<212> DNA

<213> Homo sapiens

<400> 296

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<210> 297

<211> 1059

<212> DNA

<213> Homo sapiens

<400> 297

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<210> 298

<211> 1769

<212> DNA

<213> Homo sapiens

<400> 298

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1769

<210> 299

<211> 463

<212> DNA

<213> Homo sapiens

<400> 299

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463

<210> 300
 <211> 703
 <212> DNA
 <213> Homo sapiens

<400> 300
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 <211> 887
 <212> DNA
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<210> 302
 <211> 905
 <212> DNA
 <213> Homo sapiens

<400> 302

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<210> 303

<211> 1832

<212> DNA

<213> Homo sapiens

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<210> 304

<211> 1824

<212> DNA

<213> Homo sapiens

<400> 304

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<210> 305
 <211> 759
 <212> DNA
 <213> Homo sapiens

<400> 305
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 759

<210> 306
 <211> 938
 <212> DNA
 <213> Homo sapiens

<400> 306
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<210> 307

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 307

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<210> 308

<211> 1698

<212> DNA

<213> Homo sapiens

<400> 308

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<210> 309

<211> 1102

<212> DNA

<213> Homo sapiens

<400> 309

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<210> 310

<211> 519

<212> DNA

<213> Homo sapiens

<400> 310

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acaaaacaaa catgtagttt gaaggcggtc agatttcttt gagaaatctt tgtagagtta 420
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taaaaaaaaa aaaaaataaa aaaaaaaaaa aaaaaaaaaa 519

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<210> 311

<211> 2335

<212> DNA

<213> Homo sapiens

<400> 311

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<210> 312

<211> 1027

<212> DNA

<213> Homo sapiens

<400> 312

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gcggaccgaa gaacgcagga agggggcccg ggggacccgc ccccgcccg ccgcagccat 180
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<210> 313

<211> 1068

<212> DNA

<213> Homo sapiens

<400> 313

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cagagaactt ctacagtgtg ttcgagggcg agctctccga taccatcccc gtggtgcacg 180

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<210> 314

<211> 810

<212> DNA

<213> Homo sapiens

<400> 314

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<210> 315

<211> 2505

<212> DNA

<213> Homo sapiens

<400> 315

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<210> 316

<211> 1588

<212> DNA

<213> Homo sapiens

<400> 316

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<210> 317

<211> 1831

<212> DNA

<213> Homo sapiens

<400> 317

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<210> 318

<211> 3476

<212> DNA

<213> Homo sapiens

<400> 318

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<210> 319

<211> 1665

<212> DNA

<213> Homo sapiens

<400> 319

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<210> 320

<211> 1571

<212> DNA

<213> Homo sapiens

<400> 320

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<211> 1549

<212> DNA

<213> Homo sapiens

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<210> 322

<211> 2064

<212> DNA

<213> Homo sapiens

<400> 322

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<210> 323

<211> 1317

<212> DNA

<213> Homo sapiens

<400> 323

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<210> 324

<211> 1483

<212> DNA

<213> Homo sapiens

<400> 324

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<210> 325

<211> 1067

<212> DNA

<213> Homo sapiens

<400> 325

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<210> 326

<211> 915

<212> DNA

<213> Homo sapiens

<400> 326

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<210> 327

<211> 2338

<212> DNA

<213> Homo sapiens

<400> 327

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<210> 328

<211> 2519

<212> DNA

<213> Homo sapiens

<400> 328

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<210> 329

<211> 1623

<212> DNA

<213> Homo sapiens

<400> 329

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<210> 330

<211> 3379

<212> DNA

<213> Homo sapiens

<400> 330

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<210> 331

<211> 964

<212> DNA

<213> Homo sapiens

<400> 331

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<210> 332

<211> 1937

<212> DNA

<213> Homo sapiens

<400> 332

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<210> 333

<211> 2029

<212> DNA

<213> Homo sapiens

<400> 333

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<210> 334

<211> 2923

<212> DNA

<213> Homo sapiens

<400> 334

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<210> 335

<211> 2283

<212> DNA

<213> Homo sapiens

<400> 335

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<211> 2765

<212> DNA

<213> Homo sapiens

<400> 336

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<210> 337

<211> 1567

<212> DNA

<213> Homo sapiens

<400> 337

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<210> 338

<211> 2224

<212> DNA

<213> Homo sapiens

<400> 338

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<210> 339

<211> 854

<212> DNA

<213> Homo sapiens

<400> 339

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854

<210> 340

<211> 1816

<212> DNA

<213> Homo sapiens

<400> 340

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<210> 341

<211> 696

<212> DNA

<213> Homo sapiens

<400> 341

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<210> 342

<211> 4912

<212> DNA

<213> Homo sapiens

<400> 342

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<213> Homo sapiens

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<400> 350

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gctccgtcct aaaaaaaaaa aaaagtaaat atctgttgat gaaaaaactg acacttccta 180
tgggtttacc tcttttcctt ccgttgtttt ctctttggta tccctcacgc gttttcccct 240
ctccgctgca gtcacctatt tcccacttgt tttcttctc tcttcttct tttcttatt 300
gtgtctccc tgccaccagt cacaggcttg tggctacaa ataatgctgg tttgggttta 360
ttttaaaaca tctaacaatga gatcagtgcc tgctttttaa agaagcatta cattatgtat 420
tagttataca aattattaga caatgtctta tctttatatt attgttttac acatagaaca 480
gagactatit ggagcctttg gaataacatt ccagcgtata aatataaatg aaatagtttg 540
gcaaattaac tctctccagg ggtcatctag aaatatgatt ctgtcatcag atagaaattc 600
tattgctaga gtcttttagc cagcaaatag attttctatg cttggtagagc aaattcatca 660
caaatttgaa gctagttaca aataaaataa aataaaataa attaattaaa aagaaatit 720
aaaaatccca acttacagtt taaaaagaag aaaagtggaa aaaaaaaca atgaacaaaa 780
aaaaaaaaaa a                    791

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<210> 351

<211> 1474

<212> DNA

<213> Homo sapiens

<400> 351

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aggtcaatat gcagaaaatg ctcccagaaa ttgatcagaa taaggaccgc atgttggaga 120
ttttggaagg aaagggactg agtttcttat tcccactcct caaatiggag aaggaactgt 180
tgaagcaaat aaagttagat ccatcccctc aaaccatata taaatggatt aaagataaca 240
tctctcccaa acttcatgta gataaaggat ttgtgaacat cttaatgact agcttcttac 300
agtacatttc tagtgaagta aaccccccca gcatgaaac agattcatcc tctgtctctt 360
ccaaagaaca gttagagcag gaaaaacaac tactactatc tttcaagcca gtaatgcaga 420
aatttcttca tgatcacgtt gatctacaag tcagtgcctt gtatgctctc cagggtgcact 480
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cgggaaaagg caaggctttg ttccaggtga atcagtggct aacctgggta gaaactgctg 660
aagaagaaga atcagaggaa gaagctgact aaagaaccag ccaaagcctt aaattgtgca 720
aaacatactg ttgctatgat gtaactgcat ttgacctaac cactgcgaaa attcattccg 780

```

```

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attttaatat ctttgagcct gggcaagtgc acaagtcttt ttaaagaaa catggtttac 1260
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gtgaaacaaa tggtgagaat ttgaattgg cctcctatt atagtattga aattaagtct 1380
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attgtgatac ttgaaaaaaa aaaaaaaaaa aaaa 1474

```

<210> 352

<211> 2932

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1332)

<223> "n" may be "a", "c", "g", or "t".

<400> 352

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agtgaataaa gacaacacct gtagctccaa acctgtagaa gcagatccca gagaaaagca 180
ggccagttct ctcttggaat cccagaaagt cccaggaatt ggaggcttca gtgctgcagt 240
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cccctcctgt gtgctctcgg gtgactagcc ctctccctct ccaggtttag cttctggaga 360
aattaaatca aagaggctct agaactgggg atggcaggca ttgagtgcag ggagtgagtt 420
gccagaggct gagagcagag agatttagtg gcagtgggca gagcaaacag caaatgact 480
gccctcttcc ctggccttgc tccagaaact gacagccag acatacacac tcccagaagg 540
cagttggagg tcccccgagg caatcagaac ccccacaga gaagacctcc agatactgac 600
atttagaagc cttctgacca aagagcttgc ctggccaccc actggcttac tcgctgacag 660
gccatgctcc tgccgtacac accggtacct atcagtcac ctcattggg cttttccaga 720
cttctgagga aagcttccaa catgaagagg gatttcaaaa caaacagaga gagagagaga 780
gagagagaga gagagagaga gagagagaga aaagaaatat aaacaatgca gggagcaaaa 840
gataacttca aataaactca aaatattctt ctgggagaga tgagacaata ttgcatacat 900
aaaacaagaa gaggatgcta tcaataaatt taaaaaaaaa gtaacagaaa gtaagaaaga 960
cctctaagaa atgtttctga aatgaggtat aattttttt tttttgagg ggagtcttgc 1020
tctgtcacc aggctggagc gcagtggcgt gatctcggct cactgcaacc tccgtctccc 1080
gggttcaagt gattctctg cctcagcttc ctgagtagct gggattacag gcatgcgcca 1140
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cccaggctgg anggcagtgg tgcaactcta aactctgcct cccgggttca agcgattctc 1380

```

```

gtgcgtcacc tcccaagtag ctggggctag aggcattgtgc caccatgtct ggttactttt 1440
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tgcttttttt ctatattttc gtttcaactc aactttttaa aaatcatact tgtatatttg 1560
tatatttata tttattttcc aagacctcat ttgcctcttt ttcataatgg gctattattg 1620
ctccatggta cagaatcttc tgttctttcc taaactatta gttattttta aaatatttgt 1680
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ggtgggagga tcacctgagc cctggaggtt gagggtgctg tgagccatga tggcaccact 2880
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<210> 353

<211> 1254

<212> DNA

<213> Homo sapiens

<400> 353

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tgcatctatg gtgagggcta cagcaatgcc cagagtcta agcagatgta ctgcgtgttc 180
aaccgcaacg aggatgcctg ccgctatggc agtgccatcg ggggtctggc ctccctggcc 240
taccagcgct acaaggctgg cgtggacgac ttcatccaga attacgttga cccactccg 300
gacccaaca ctgcctacgc ctctacca ggtgcatctg tggacaacta ccaacagcca 360
cccttcaccc agaacgcgga gaccaccgag ggctaccagc cggccctgt gtactgagcg 420
gcggttagcg tgggaagggg gacagagagg gccctcccct ctgccctgga ctttcccatg 480
agcctcctgg aactgccagc ccctctcttt cacctgttcc atcctgtgca gctgacacac 540
agctaaggag cctcatagcc tggcgggggc tggcagagcc acacccaag tgctgtgcc 600
cagagggtt cagtcagcg ctactctc cagggcactt ttaggaaagg gtttttagct 660
agtgttttc ctgcgtttta atgacctcag cccgcctgc agtggctaga agccagcagg 720
tgccatgtg ctactgacaa gtgcctcagc ttcccccg cccgggtcag gccgtgggag 780
ccgtattat ctgcgttctc tgccaaagac tcgtgggggc catcacacct gccctgtgca 840

```



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gcggagccgg accaggctct tgtgtcctca ctcaggtttg cttccctgt gccactgtct 900
gtatgatctg ggggccacca cctgtgccg gtggcctctg ggctgcctcc cgtgggtgtga 960
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gggagggcag ggggtcccca tggctcccag actctgtctg tgccgagtgt attataaaat 1140
cgtgggggag atgcccggcc tgggatgctg tttggagacg gaataaatgt tttctcattc 1200
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1254

```

<210> 354

<211> 1324

<212> DNA

<213> Homo sapiens

<400> 354

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tcggggacct ccgcagcagc tcccagggc ccacgggcca gcccgcgcg cctcgcaacc 180
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atatatttga cagttagga aattgtctat tcctgatata attactgtag tactcttgct 1260
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```

<210> 355

<211> 2303

<212> DNA

<213> Homo sapiens

<400> 355

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cggacgcgtg ggcggcgac gcggcctgag gctgctccc gacaaggga acgagcggtt 60
cgtttggact tctcgacttg agtccccgc tccttcgcc cgcctctgc agtcctcagc 120

```

```

gcagtctttc cacaggagcc agcatacttc ctgaacatgg agagtgttgt tcgccgctgc 180
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gagaaaaaga atgaccacac ctatcgagtt tttaaaactg tgaaccggcg agcacacatc 840
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```

<210> 356

<211> 361

<212> PRT

<213> Homo sapiens

<400> 356

Met Phe Ser Ser Val Ala His Leu Ala Arg Ala Asn Pro Phe Asn Thr

1

5

10

15

195/217

Pro His Leu Gln Leu Val His Asp Gly Leu Gly Asp Leu Arg Ser Ser
20 25 30

Ser Pro Gly Pro Thr Gly Gln Pro Arg Arg Pro Arg Asn Leu Ala Ala
35 40 45

Ala Ala Val Glu Glu Tyr Ser Cys Glu Phe Gly Ser Ala Lys Tyr Tyr
50 55 60

Ala Leu Cys Gly Phe Gly Gly Val Leu Ser Cys Gly Leu Thr His Thr
65 70 75 80

Ala Val Val Pro Leu Asp Leu Val Lys Cys Arg Met Gln Val Asp Pro
85 90 95

Gln Lys Tyr Lys Gly Ile Phe Asn Gly Phe Ser Val Thr Leu Lys Glu
100 105 110

Asp Gly Val Arg Gly Leu Ala Lys Gly Trp Ala Pro Thr Phe Leu Gly
115 120 125

Tyr Ser Met Gln Gly Leu Cys Lys Phe Gly Phe Tyr Glu Val Phe Lys
130 135 140

Val Leu Tyr Ser Asn Met Leu Gly Glu Glu Asn Thr Tyr Leu Trp Arg
145 150 155 160

Thr Ser Leu Tyr Leu Ala Ala Ser Ala Ser Ala Glu Phe Phe Ala Asp
165 170 175

Ile Ala Leu Ala Pro Met Glu Ala Ala Lys Val Arg Ile Gln Thr Gln
180 185 190

Pro Gly Tyr Ala Asn Thr Leu Arg Asp Ala Ala Pro Lys Met Tyr Lys
195 200 205

Glu Glu Gly Leu Lys Ala Phe Tyr Lys Gly Val Ala Pro Leu Trp Met
210 215 220

Arg Gln Ile Pro Tyr Thr Met Met Lys Phe Ala Cys Phe Glu Arg Thr
225 230 235 240

Val Glu Ala Leu Tyr Lys Phe Val Val Pro Lys Pro Arg Ser Glu Cys
245 250 255

Ser Lys Pro Glu Gln Leu Val Val Thr Phe Val Ala Gly Tyr Ile Ala
260 265 270

Gly Val Phe Cys Ala Ile Val Ser His Pro Ala Asp Ser Val Val Ser
 275 280 285

Val Leu Asn Lys Glu Lys Gly Ser Ser Ala Ser Leu Val Leu Lys Arg
 290 295 300

Leu Gly Phe Lys Gly Val Trp Lys Gly Leu Phe Ala Arg Ile Ile Met
 305 310 315 320

Ile Gly Thr Leu Thr Ala Leu Gln Trp Phe Ile Tyr Asp Ser Val Lys
 325 330 335

Val Tyr Phe Arg Leu Pro Arg Pro Pro Pro Glu Met Pro Glu Ser
 340 345 350

Leu Lys Lys Lys Leu Gly Leu Thr Gln
 355 360

<210> 357

<211> 640

<212> PRT

<213> Homo sapiens

<400> 357

Met Glu Ser Val Val Arg Arg Cys Pro Phe Leu Ser Arg Val Pro Gln
 1 5 10 15

Ala Phe Leu Gln Lys Ala Gly Lys Ser Leu Leu Phe Tyr Ala Gln Asn
 20 25 30

Cys Pro Lys Met Met Glu Val Gly Ala Lys Pro Ala Pro Arg Ala Leu
 35 40 45

Ser Thr Ala Ala Val His Tyr Gln Gln Ile Lys Glu Thr Pro Pro Ala
 50 55 60

Ser Glu Lys Asp Lys Thr Ala Lys Ala Lys Val Gln Gln Thr Pro Asp
 65 70 75 80

Gly Ser Gln Gln Ser Pro Asp Gly Thr Gln Leu Pro Ser Gly His Pro
 85 90 95

Leu Pro Ala Thr Ser Gln Gly Thr Ala Ser Lys Cys Pro Phe Leu Ala
 100 105 110

Ala Gln Met Asn Gln Arg Gly Ser Ser Val Phe Cys Lys Ala Ser Leu
 115 120 125

Glu Leu Gln Glu Asp Val Gln Glu Met Asn Ala Val Arg Lys Glu Val
 130 135 140

Ala Glu Thr Ser Ala Gly Pro Ser Val Val Ser Val Lys Thr Asp Gly
 145 150 155 160

Gly Asp Pro Ser Gly Leu Leu Lys Asn Phe Gln Asp Ile Met Gln Lys
 165 170 175

Gln Arg Pro Glu Arg Val Ser His Leu Leu Gln Asp Asn Leu Pro Lys
 180 185 190

Ser Val Ser Thr Phe Gln Tyr Asp Arg Phe Phe Glu Lys Lys Ile Asp
 195 200 205

Glu Lys Lys Asn Asp His Thr Tyr Arg Val Phe Lys Thr Val Asn Arg
 210 215 220

Arg Ala His Ile Phe Pro Met Ala Asp Asp Tyr Ser Asp Ser Leu Ile
 225 230 235 240

Thr Lys Lys Gln Val Ser Val Trp Cys Ser Asn Asp Tyr Leu Gly Met
 245 250 255

Ser Arg His Pro Arg Val Cys Gly Ala Val Met Asp Thr Leu Lys Gln
 260 265 270

His Gly Ala Gly Ala Gly Gly Thr Arg Asn Ile Ser Gly Thr Ser Lys
 275 280 285

Phe His Val Asp Leu Glu Arg Glu Leu Ala Asp Leu His Gly Lys Asp
 290 295 300

Ala Ala Leu Leu Phe Ser Ser Cys Phe Val Ala Asn Asp Ser Thr Leu
 305 310 315 320

Phe Thr Leu Ala Lys Met Met Pro Gly Cys Glu Ile Tyr Ser Asp Ser
 325 330 335

Gly Asn His Ala Ser Met Ile Gln Gly Ile Arg Asn Ser Arg Val Pro
 340 345 350

Lys Tyr Ile Phe Arg His Asn Asp Val Ser His Leu Arg Glu Leu Leu
 355 360 365

Gln Arg Ser Asp Pro Ser Val Pro Lys Ile Val Ala Phe Glu Thr Val
 370 375 380

His Ser Met Asp Gly Ala Val Cys Pro Leu Glu Glu Leu Cys Asp Val
 385 390 395 400

Ala His Glu Phe Gly Ala Ile Thr Phe Val Asp Glu Val His Ala Val
 405 410 415

Gly Leu Tyr Gly Ala Arg Gly Gly Gly Ile Gly Asp Arg Asp Gly Val
 420 425 430

Met Pro Lys Met Asp Ile Ile Ser Gly Thr Leu Gly Lys Ala Phe Gly
 435 440 445

Cys Val Gly Gly Tyr Ile Ala Ser Thr Ser Ser Leu Ile Asp Thr Val
 450 455 460

Arg Ser Tyr Ala Ala Gly Phe Ile Phe Thr Thr Ser Leu Pro Pro Met
 465 470 475 480

Leu Leu Ala Gly Ala Leu Glu Ser Val Arg Ile Leu Lys Ser Ala Glu
 485 490 495

Gly Arg Val Leu Arg Arg Gln His Gln Arg Asn Val Lys Leu Met Arg
 500 505 510

Gln Met Leu Met Asp Ala Gly Leu Pro Val Val His Cys Pro Ser His
 515 520 525

Ile Ile Pro Val Arg Val Ala Asp Ala Ala Lys Asn Thr Glu Val Cys
 530 535 540

Asp Glu Leu Met Ser Arg His Asn Ile Tyr Val Gln Ala Ile Asn Tyr
 545 550 555 560

Pro Thr Val Pro Arg Gly Glu Glu Leu Leu Arg Ile Ala Pro Thr Pro
 565 570 575

His His Thr Pro Gln Met Met Asn Tyr Phe Leu Glu Asn Leu Leu Val
 580 585 590

Thr Trp Lys Gln Val Gly Leu Glu Leu Lys Pro His Ser Ser Ala Glu
 595 600 605

Cys Asn Phe Cys Arg Arg Pro Leu His Phe Glu Val Met Ser Glu Arg
 610 615 620

Glu Lys Ser Tyr Phe Ser Gly Leu Ser Lys Leu Val Ser Ala Gln Ala
 625 630 635 640

<210> 358

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 358

Gln Ile Gly Ala Lys Phe Trp Glu Val

1

5

<210> 359

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 359

Phe Met Pro Gly Phe Ala Pro Leu Thr

1

5

<210> 360

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 360

Thr Leu Leu Val Ala Val Phe Gln Asp Val

1

5

10

<210> 361

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 361

Val Ala Tyr Leu Gly Phe Val Phe Tyr Leu
1 5 10

<210> 362

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 362

Leu Leu Pro Thr Leu Arg Lys Gln Tyr Cys
1 5 10

<210> 363

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 363

Met Val Tyr Asp Leu Tyr Lys Thr Leu
1 5

<210> 364

<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 364
Gly Leu Cys Lys Phe Gly Phe Tyr Glu Val
1 5 10

<210> 365
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 365
Phe Gly Phe Tyr Glu Val Phe Lys Val
1 5

<210> 366
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 366
Leu Gln Trp Phe Ile Tyr Asp Ser Val
1 5

<210> 367
<211> 10
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 367

Ala Leu Ala Pro Met Glu Ala Ala Lys Val
1 5 10

<210> 368

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 368

Arg Thr Val Glu Ala Leu Tyr Lys Phe Val
1 5 10

<210> 369

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 369

Val Leu Ser Cys Gly Leu Thr His Thr
1 5

<210> 370

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed

peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 370

Ala Leu Leu Phe Ser Ser Cys Phe Val

1

5

<210> 371

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 371

Phe Leu Ser Arg Val Pro Gln Ala Phe Leu

1

5

10

<210> 372

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 372

Met Leu Leu Ala Gly Ala Leu Glu Ser Val

1

5

10

<210> 373

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 373

Leu Leu Gln Asp Asn Leu Pro Lys Ser Val

1 5 10

<210> 374

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 374

Leu Met Ser Arg His Asn Ile Tyr Val

1 5

<210> 375

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 375

Ser Leu Ile Asp Thr Val Arg Ser Tyr Ala

1 5 10

<210> 376

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 376

Phe Leu Gln Lys Ala Gly Lys Ser Leu Leu

1 5 10

<210> 377

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 377

Leu Leu Phe Ser Ser Cys Phe Val Ala

1 5

<210> 378

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 378

Gly Leu Leu Lys Asn Phe Gln Asp Ile

1 5

<210> 379

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A2 restricted cytotoxic
T lymphocytes

<400> 379

Ser Val Trp Cys Ser Asn Asp Tyr Leu

1 5

<210> 380

<211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Designed
 peptide recognized by HLA-A2 restricted cytotoxic
 T lymphocytes

<400> 380
 Leu Leu Val Thr Trp Lys Gln Val Gly Leu
 1 5 10

<210> 381
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Designed
 peptide recognized by HLA-A2 restricted cytotoxic
 T lymphocytes

<400> 381
 Val Ala Asn Asp Ser Thr Leu Phe Thr Leu
 1 5 10

<210> 382
 <211> 974
 <212> DNA
 <213> Homo sapiens

<400> 382
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 gccctacca cttccgggcc ccagccgca tcttctggcg gaccgtgcga ggtatgctgc 120
 cccacaaaac caagcgaggc caggccgctc tggaccgtct caaggtgttt gacggcatcc 180
 cacctcccta cgacaagaaa aagcggatgg tggttcctgc tgcctcaag gtcgtgcgtc 240
 tgaagcctac aagaaagttt gcctatctgg ggcgcctggc tcacgaggtt ggctggaagt 300
 accaggcagt gacagccacc ctggaggaga agaggaaaga gaaagccaag atccactacc 360
 ggaagaagaa acagctcatg aggtacgga aacaggccga gaagaacgtg gagaagaaaa 420
 ttgacaaata cacagaggtc ctcaagaccc acggactcct ggtctgagcc caataaagac 480
 tgtaattcc tcatgcgttg cctgcccttc ctccattgtt gccctggaat gtacgggacc 540
 caggggcagc agcagtcag gtgccacagg cagccctggg acataggaag ctgggagcaa 600
 ggaaagggtc ttagtcactg cctcccgaag ttgcttgaaa gcactcggag aattgtgcag 660
 gtgtcattta tctatgacca ataggaagag caaccagtta ctatgagtga aaggagacca 720
 gaagactgat tggaggggccc tatcttgtga gtggggcatc tgttggactt cccacctggt 780

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catatactct gcagctgtta gaatgtgcaa gcacttgggg acagcatgag ctgtctgttg 840
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ggcatcggcc atgtctctca cctgtatitt gtaatcagaa ataaattgct tttaaagaaa 960
aaaaaaaaaa aaaa 974

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<210> 383
<211> 821
<212> DNA
<213> Homo sapiens

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<400> 383
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ccgtcaccaa gttgggccgc ttggtaagg acatgaagat caagtccctg gaggagatct 120
atctcttctc cctgcccatt aaggaatcag agatcattga tttcttcctg ggggcctctc 180
tcaaggatga ggttttgaag attatgccag tgcagaagca gaccctgcc gccagcgca 240
ccaggttcaa ggcatttgtt gctatcgggg actacaatgg ccacgtcggg ctgggtgtta 300
agtgtctcaa ggaggtggcc accgccatcc gtggggccat catcctggcc aagctctcca 360
tcgtccccgt gcgcagaggc tactggggga acaagatcgg caagccccac actgtccctt 420
gcaaggtgac aggccgctgc ggctctgtgc tggtagcct catccctgca cccaggggca 480
ctggcatcgt ctccgcacct gtgcctaaga agctgtcat gatggctggg atcgatgact 540
gctacacctc agccccgggc tgcactgcca ccctgggcaa cttcgccaag gccacctttg 600
atgccatttc taagacctac agctacctga cccccgacct ctggaaggag actgtattca 660
ccaagtctcc ctatcaggag ttcactgacc acctcgtcaa gaccacacc agagtctccg 720
tgcagcggac tcaggctcca gctgtggcta caacataggg tttttataca agaaaaataa 780
agtgaattta gcgtgaaaaa aaaaaaaaaa aaaaaaaaaa a 821

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<210> 384
<211> 741
<212> DNA
<213> Homo sapiens

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<400> 384
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atcagcttga agaactatga tccccagaag gacaagcgct tctcgggcac cgtcaggctt 180
aagtccactc cccgccctaa gttctctgtg tgtgtcctgg gggaccagca gcaactgtgac 240
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aataaaaaac tggtaagaa gctggccaag aagtatgatg cgtttttggc ctgagagtct 360
ctgatcaagc agattccacg aatcctcggc ccaggtttaa ataaggcagg aaagttccct 420
tccctgctca cacacaacga aaacatggtg gccaaagtgg atgaggtgaa gtccacaatc 480
aagttccaaa tgaagaaggt gttatgtctg gctgtagctg ttggtcacgt gaagatgaca 540
gacgatgagc ttgtgtataa cattcacctg gctgtcaact tcttggtgtc attgctcaag 600
aaaaactggc agaattgtcg ggccttatat atcaagagcc ccatgggcaa gcccagcgcg 660
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aaaaaaaaaa aaaaaaaaaa a 741

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<210> 385
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 385
 Met Asn Thr Asn Pro Ser Arg Gly Pro Tyr His Phe Arg Ala Pro Ser
 1 5 10 15

 Arg Ile Phe Trp Arg Thr Val Arg Gly Met Leu Pro His Lys Thr Lys
 20 25 30

 Arg Gly Gln Ala Ala Leu Asp Arg Leu Lys Val Phe Asp Gly Ile Pro
 35 40 45

 Pro Pro Tyr Asp Lys Lys Lys Arg Met Val Val Pro Ala Ala Leu Lys
 50 55 60

 Val Val Arg Leu Lys Pro Thr Arg Lys Phe Ala Tyr Leu Gly Arg Leu
 65 70 75 80

 Ala His Glu Val Gly Trp Lys Tyr Gln Ala Val Thr Ala Thr Leu Glu
 85 90 95

 Glu Lys Arg Lys Glu Lys Ala Lys Ile His Tyr Arg Lys Lys Lys Gln
 100 105 110

 Leu Met Arg Leu Arg Lys Gln Ala Glu Lys Asn Val Glu Lys Lys Ile
 115 120 125

 Asp Lys Tyr Thr Glu Val Leu Lys Thr His Gly Leu Leu Val
 130 135 140

<210> 386
 <211> 233
 <212> PRT
 <213> Homo sapiens

<400> 386
 Met Pro Val Thr Lys Leu Gly Arg Leu Val Lys Asp Met Lys Ile Lys
 1 5 10 15

 Ser Leu Glu Glu Ile Tyr Leu Phe Ser Leu Pro Ile Lys Glu Ser Glu
 20 25 30

 Ile Ile Asp Phe Phe Leu Gly Ala Ser Leu Lys Asp Glu Val Leu Lys

<211> 217

<213> Homo sapiens

Met Ser Ser Lys Val Ser Arg Asp Thr Leu Tyr Glu Ala Val Arg Glu
1 5 10 15

210/217

Val Leu His Gly Asn Gln Arg Lys Arg Arg Lys Phe Leu Glu Thr Val
20 25 30

Glu Leu Gln Ile Ser Leu Lys Asn Tyr Asp Pro Gln Lys Asp Lys Arg
35 40 45

Phe Ser Gly Thr Val Arg Leu Lys Ser Thr Pro Arg Pro Lys Phe Ser
50 55 60

Val Cys Val Leu Gly Asp Gln Gln His Cys Asp Glu Ala Lys Ala Val
65 70 75 80

Asp Ile Pro His Met Asp Ile Glu Ala Leu Lys Lys Leu Asn Lys Asn
85 90 95

Lys Lys Leu Val Lys Lys Leu Ala Lys Lys Tyr Asp Ala Phe Leu Ala
100 105 110

Ser Glu Ser Leu Ile Lys Gln Ile Pro Arg Ile Leu Gly Pro Gly Leu
115 120 125

Asn Lys Ala Gly Lys Phe Pro Ser Leu Leu Thr His Asn Glu Asn Met
130 135 140

Val Ala Lys Val Asp Glu Val Lys Ser Thr Ile Lys Phe Gln Met Lys
145 150 155 160

Lys Val Leu Cys Leu Ala Val Ala Val Gly His Val Lys Met Thr Asp
165 170 175

Asp Glu Leu Val Tyr Asn Ile His Leu Ala Val Asn Phe Leu Val Ser
180 185 190

Leu Leu Lys Lys Asn Trp Gln Asn Val Arg Ala Leu Tyr Ile Lys Ser
195 200 205

Pro Met Gly Lys Pro Gln Arg Leu Tyr
210 215

<210> 388

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic

T lymphocytes

<400> 388

Leu Val Leu Asp Gly Arg Gly His Leu

1

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<210> 389

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 389

His Leu Leu Gly Arg Leu Ala Ala Ile

1

5

<210> 390

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 390

Ala Ile Val Ala Lys Gln Val Leu Leu

1

5

<210> 391

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 391

Val Leu Leu Gly Arg Lys Val Val Val
1 5

<210> 392

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 392

Ala Phe Leu Arg Lys Arg Met Asn Thr
1 5

<210> 393

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 393

His Phe Arg Ala Pro Ser Arg Ile Phe
1 5

<210> 394

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 394

Val Leu Lys Thr His Gly Leu Leu Val
1 5

<210> 395

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 395

Pro Val Thr Lys Leu Gly Arg Leu Val

1

5

<210> 396

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 396

Lys Ile Met Pro Val Gln Lys Gln Thr

1

5

<210> 397

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 397

Val Thr Gly Arg Cys Gly Ser Val Leu

1

5

<210> 398

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 398

Arg Leu Ile Pro Ala Pro Arg Gly Thr

1

5

<210> 399

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 399

Asp Leu Trp Lys Glu Thr Val Phe Thr

1

5

<210> 400

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 400

His Leu Val Lys Thr His Thr Arg Val

1

5

<210> 401

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 401

His Thr Arg Val Ser Val Gln Arg Thr
1 5

<210> 402

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 402

Arg Thr Gln Ala Pro Ala Val Ala Thr
1 5

<210> 403

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 403

Thr Leu Tyr Glu Ala Val Arg Glu Val
1 5

<210> 404

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic

T lymphocytes

<400> 404

Glu Thr Val Glu Leu Gln Ile Ser Leu

1

5

<210> 405

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 405

Lys Val Asp Glu Val Lys Ser Thr Ile

1

5

<210> 406

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 406

Thr Ile Lys Phe Gln Met Lys Val Leu

1

5

<210> 407

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 407

Lys Val Leu Cys Leu Ala Val Ala Val
1 5

<210> 408

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Designed
peptide recognized by HLA-A26 restricted cytotoxic
T lymphocytes

<400> 408

Ser Thr Met Gly Lys Pro Gln Arg Leu
1 5